



C. R. Orcutt,
San Diego, Cal.
Dec. 2, 1884.

K P O.

Laboratory of Organic Natural History.

Notes and Memoranda.

Orcutt
Genealogy.
1.

The origin of the Orcutt family in America, according to the legend preserved in the family, is traced back to three brothers who came over from England. ~~They~~ settled in Old Bridgeport^{water}, Connecticut but nothing further is known. The ivory head and silver ferrule of a cane in the possession of our branch of the family was said to have been handed down from John Orcutt to son John for fourteen generations upon its reaching my grandfather John Orcutt's hands.

My ^{great} grandfather, John Orcutt, married Jerusha Hanmer; their children were Darius, William, Nathan, Galman, Polly and John. John was born in Connecticut May 26, 1754 and married Mary Hurdlee who was born in Ashford Conn. Feb. 15, 1755; their children were Silas - born June 7, 1778; Esther - born May 12, 1780 and died Oct. 3, 1790; Lucy - born Apr. 10, 1782 and died Oct. 4, 1783; Sylvester - born Oct. 27, 1784; Miller - born Dec. 22, 1786 and died Jan'y 22, 1791; John - born Oct. 24, 1789 and died May 3, 1877; Marwin - born Sept. 27, 1791 and died Sept. 5, 1873; and Polly - born Oct. 6, 1793. John Orcutt, my great grandfather served in the Revolutionary war under Washington and lies buried in Hartland Vermont. He introduced the Indian wheat to Connecticut; ^{this grain} which was afterwards carried to Vermont by his son John.

John Orcutt, my grandfather, born in Mansfield Connecticut, married Sally Ellis Ballard, Feb'y 19, 1815, who was born in Ashford, Conn. May 18, 1787. Their children were Mary Hurdlee - born Nov. 29, 1815 in Ashford Conn. and died June 18, 1873 in Hartland Vermont; John Hanmer - born July 21, 1818 in Monson Mass. and died in Hartland Vermont, May 3, 1848; and Herman Chandler - born Sept. 9, 1825 in Monson Massachusetts. Mrs. S. E. Orcutt died Sept. 10, 1860 in Hartland. Herman Chandler Orcutt and Eliza Eastin Gray were married at Woodstock Vermont Jan'y 1st 1852 by Rev. Mr. M. Herrick of St. James church. Their children were John Herman Orcutt, born Monday morning July 14, 1856 at Cedar Hill, Hartford Vermont; Galman Edward Orcutt, born Monday morning Jan'y 14, 1861 at Woodstock Vermont and died at Hartland Vermont, Friday, July 22, 1864; and Charles Russell Orcutt, born Wednesday morning, April 27, 1864 at Hartland Vermont.

Mrs. E. E. Orcutt was born at Woodstock, Sunday, Feb'y 20, 1825.

{The above copied from}
{records, Dec. 2, 1884.}

E. R. Orcutt.

Early
collections.
2.

Since my earliest remembrance I have been a collector and usually amused myself at first with collections of buttons, paper men and later with the addition of beans. In 1875 I first began a garden and in the fall my collection of beans numbered two hundred two varieties which were exhibited in two shallow boxes, the varieties separated by ~~the~~ strips of wood. This collection shown at the annual county fair at Woodstock Vermont, attracted the attention of Hon. E. M. Goodwin and led to our pleasant acquaintance with him.

My brother John and myself now commenced forming our collection of shells, *Helix albolabris*, *H. monodon*, *Succinea obliqua* and later *H. Sayi*, *H. dentifera* and *H. asteriscus* formed the most valued of our possessions and which occupied a small tea plate for some time till my father built a comfortable cabinet in 1877 for our then considerable collections of minerals, birds eggs, insects and shells which we accumulated under the enthusiastic direction of Mr. Goodwin with the additional encouragement of Byron P. Ruggles, another enthusiastic naturalist, Hosea Dolton—an astronomer at Woodstock and who contributed a few stamps to my collection and the companionship of Charles C. Tracey, Fred. M. Goodwin, and a few others.

In 1878, I began my botanical collections, ^{commencing March 1st} gathering all the different woods for which I could obtain names, nuts and seeds and receiving specimens of woods from my aunt, Mrs. L. E. Anthony, and her daughter, Miss E. E. Anthony but the collection received its greatest addition in the fall of 1877 when my father and mother visited relations in Massachusetts and Connecticut and brought back the native woods, acorns, shells, minerals, etc. for us.

In 1878 my attention was more especially directed to the native ferns and wild flowers around our county home and the trips to the woods in search of natural objects increased. With my mother's assistance about thirty varieties of ferns were secured and an herbarium of about two hundred species of plants was formed. In this way many happy days were spent in the company of father, mother, brother and friends and in the care of the specimens obtained and their arrangement in the black cherry cabinet. Our first exchange was made with Prof. R. G. Wagon of Wheaton Ill., through my cousin, Miss L. P. Gray. and our books on natural history were Goldman's *Animated Nature*, Thompson's *Vermont*, Mrs. Lincoln's *Botany*, George M. Arnold and How *Plants Grow*, and Binney & Brande's *L. & F. W. shells of N. A.*

L. R. Dunt.

Objects
of this
Journal.
12-2, 1884.
3.

This blank book I purchased today with the object of recording all the items of interest relating to the natural history of this vicinity that may attract my attention; the preservation of such notes as I have previously recorded or may wish for reference; retaining articles, notes, etc. which may be published and ^{for} all other miscellaneous memoranda.

Renilla.
Sept. 1884.
4.

Found on the sandy beach of a little lagoon opening into Todos Santos Bay, Lower California in Sept. 1884 many specimens of Renilla just beneath the sand - the hollow locomotive organ extending downward. My father secured over 25 examples which I preserved in alcohol. The same very abundant at San Diego also. In water, the little white stars are very pretty against the purple background. *R. amethystina*, Verrill, according to Lockington.

Helasimus.
5.

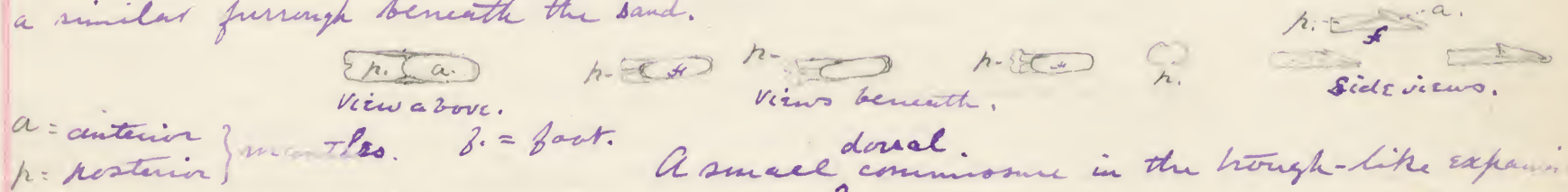
At the same locality as above we also found numerous a "fielder" "crabs" inhabiting holes in the salt marshes and easily captured in them when the tide is out. *Helasimus brevifrons*, Stimpson. We secured 45♂ and 15♀ examples. Very abundant.

Sea-slug.
6.

Dec. 4, 1884. Collect^{ed} on the muddy flats of San Diego Bay, a small slug, 8 in. Animal $\frac{3}{8}$ or $\frac{1}{2}$ inch long, $\frac{1}{8}$ wide, limaciform, ^{partly} ~~usually~~ opaque (nearly or mostly black), forward portion of body covered with a thick, shield-like mantle which slopes from the centre of the back to the anterior part of the foot ^{the front edge} forming the retractile organ of the animal. The posterior half of the animal covered by a wider ~~but similar~~ mantle, the anterior edge overlapped by the anterior mantle, the hinder edge extending behind the body forming a trough - similar to the anterior edge of the mantle of *Chlamydoceutha*. The foot broad, edge thin - mostly covered by the mantles. No eyes, ^{other organs} tentacles or ^{orifices} visible in life except the anal, sheltered by the above mentioned expansion of the posterior mantle. Habits similar to those of *Haminea vesicula* with which it is found, ploughing a similar furrow beneath the sand.

as shown in the drawings. Mantles cover the front and posterior ends of the foot, leaving the sides in the middle exposed. The space indicated by f. in side views is covered by the rolled ^{thin} edge of the foot. Sluggish in its motions.

Philine sp. indet. (See Proc. U.S. Natl Mus., 1885, p. 544.)



a = anterior } mantle views.
h = posterior }
f = foot.

A small ^{dorsal} commissure in the trough-like expansion

Bancroft
Genealogy.

Thomas Bancroft, born in England, 1622, died Aug. 19, 1691
married Sept. 15, 1648 to Elizabeth Metcalf who was born
Oct. 4, 1626 and died May 11, 1711.

Thomas Bancroft, 2^d, born July 17, 1649 married 1673 to Sarah Pools.

Samuel Bancroft born 1683, died 1722 married 1713 to Sarah
Lampoon who was born 1680 and died 1732.

Samuel Bancroft, 2^d born 1715, died 1782, married 1785 to Lydia
Parker who was born 1715 and died 1813.

Gray
Genealogy.
8.

Joseph Gray, M.D. born in Providence R.I. 1751, studied under

Dr. Mann of Providence 2 years, died 1812, married in 1780 to

Lucy Bancroft, born February 23, 1758 and died Sept. 6, 1815.

Their children were Harry, born July 2, 1781, died Sept. 16, 1782.

Henry, " May 27, 1783 " Aug. 24, 1863.

Lucy, " Feb. 5, 1785 "

Joseph, " Feb. 9, 1788. " Feb. 9, 1879.

John, " Mch. 28, 1790 "

Lydia, " May 20, 1792. " June 10, 1792.

Lydia Bancroft, " June 9, 1793, " Nov. 12, 1877.

Isaac, " July 20, 1795, " Aug. 1821.

Hannah, " Jan. 17, 1800 " Sept. 27, 1822.

Joseph Gray, M.D., 2^d, born in Nottingham West, N. H. Feb. 9, 1788, died in Vermont, Feb. 9, 1879 after an experience as a
practicing physician for full seventy years. He married July
11, 1811, Miss Eunice Russell of Cavendish Vermont who was
born Jan. 20, 1791 and died June 9, 1859. Their children were;

Pamela, born Sept. 26, 1812, died May 11, 1861.

Joseph, " Jan. 20, 1815. " Sept. 28, 1875

Lucretia Maria, " Mch. 13, 1817,

Lydia Emerson, " Jan. 2, 1819,

Eliza Eastin, " Feb. 20, 1825.

The
A. Scientist.
9.

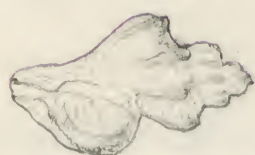
December 16, 1884, issue the first copies of "The West American Scientist" of which I have 400 printed at the "Union" office. On the 17th mail the first lot, about 300 copies, at a cost of 8c. postage. Among promised contributors are Dr. C. C. Parry, Prof. Geo. R. Kleiberger, Mrs. Z. R. Cronyn, A. M. Dr. H. W. Gould, D. Cleveland, Esq., Geo. M. Hitchcock and others. Among the first subscribers are the same, Rev. David Cronyn, Rev. H. B. Reiland, Cliff Hubbell, A. Schneider, A. Klauber and a few others.

Diphtheria.
10.

The powdered root of Indian turnip (*Arum triphyllum*) taken fresh, root sliced, first scraped, dried quickly and pulverized and applied dry to the throat or diseased part in cases of diphtheria is almost if not always a sure cure. The powder should be kept air-tight to ensure its efficiency. Also efficient for "proud flesh" and as an internal remedy. Canker lotion is good for diphtheria ~~except in severe cases~~

Muricea
11.

Found at Pt. Loma ocean beach, (S.D. Cal.) Dec. 8, 1884, a beach worn shell $\frac{7}{8}$ inch long, $\frac{1}{2}$ in. in diameter that I send to Dall, with other shells, for examination.



Shell coarsely striated, sutures distinct. *Muricea barbarensis*, Gabb.
(See Proc. U.S. Natl Mus., 1885, p. 535.)

Weeping Pine.
12.

Pinus patula a weeping Mexican pine said by Roetzl to be the handsomest pine tree in the world, of the cold region of Mexico (?).

Cal. Fan Palm.
13.

Washingtonia filifera, Wendland. Syn. *Brahea filamentosa*, *Pritchardia filamentosa*, *P. filifera*, (doubtfully referred to by Cooper as *Brahea dulcis*).

W. robusta.
14

Washingtonia robusta, Wendland. "Several years ago [1884] Geo. Such, "a well known nurseryman of South Amboy N. J. received a quantity of "seed from California [Sacramento valley! ?], reserved some for his nursery "and sold the balance to Louis Van Houtte of Ghent Belgium. Wendland "named it from specimens of this lat. V. H. exhibited it at the Intern. show "held at Ghent in 1883 when it was considered the 3^d best of 'New palms.' " (Bot. Calif. Vol. II, pg. 211 & 485. Geo. A. Purdie.). Valle de los Palmas & Castillas cañon, Lower Calif.

Mexican Palm.
15.

Brahea dulcis, Mart. syn. *Trinax tunicata* (Horticultural name), "*Corypha frigida*, Lodd., *Corypha dulcis*, Humb. & Bonpl. A Mexican palm.

Guad. Is. Palm.
16.

Erythea edulis, Watson. syn. *Brahea edulis*, ~~(?) B. Roetzlii~~.
Guadalupe Is. L. Cal.

BZ 112 Palm.
17.

Erythea armata, Watson. syn. *Brahea glauca*, *B. armata*, (?) *B. Roetzlii*.

Shrimps,
18.

Shrimps, pale-colored, one large and one small claw, carapace transparent, showing viscera, etc. Not rare under stones, near beaches and abundant on San Diego Bay, burrowing in mud or sand.

Doris
19

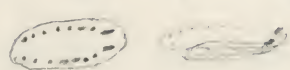
Animal translucent white, an inch or less long, the back of mantle liberally sprinkled with irregular dots and blotches of ^{brownish} black which are most conspicuous near the tentacles (just back of them), near the centre of the back and just forward of the branchiae. The posterior part of the foot also sprinkled with fine black dots.

Tips of tentacles, brown.

Animal long and narrow, foot with narrow edge, mantle inclined to curve upwards, thin, the black dots forming an irregular row along edge ~~showing~~ showing very distinctly beneath. "Doris montereyensis, young?" (vide Dall).

Doris
20

Animal small, of a more opaque white than the above; with a ^{regular} row of lemon-yellow colored dots along the edge of the mantle (7 on each side in one specimen, none of these bright spots forward of the tentacles), tentacles very conspicuous, dark brown



"Doris alabastrina, Cp." Dall.

Chromodoris

21

Animal large, 2 inches long; mantle ^{thickly} covered ~~best~~ with yellowish, prominent papillae, the intervening space sprinkled with fine, ~~the~~ blackish dots on a dirty white ground, with numerous large ^{and irregular} dark brown blotches, blotches. Under side of animal yellowish, opaque. Mantle hiding foot &c.; under side not showing the markings. Upper surface of edge of foot (and space between foot and mantle) with forward end of head (or proboscis?), sprinkled with irregular ^{or with} dark brown spots. Space between mantle & foot translucent white. "C. californiensis, Burgh." Dall.

Doris
sanguinea,
22

Bright red, small, rare, San Diego Bay and among sea-grass & under stones rocky beaches.

Doris Sandiegensis, Animal dirty white, $\frac{3}{4}$ in. long; mantle with 5 to 10 or more circles of dark brown irregularly placed along the edge of the thick mantle. No. 58, Cat. Moll. (Stearns No. 2, 1882.)

Doris,
24 Animal yellowish or pinkish white, translucent, about $\frac{3}{4}$ in. long & $\frac{1}{4}$ wide.
Tentacles light brown. Mantle thick, rough, edge bordered with prominent, irregular rows of bright yellow raised papillae.
"Doris Sandiegensis, young" Dall.

Doris
25 Animal $\frac{3}{4}$ in. long, yellowish beneath, opaque; Mantle dark chocolate brown above (light ^{yellowish} brown on the edge), with numerous fine white papillae scattered regularly over the surface. Tentacles dull yellow. One specimen among rocks, ocean beach (Sealrock), San Diego Cal., Feb'y 27, 1885. "Doris albo punctata, Cp." Dall.

Cocconeum N.S.P.
26 Find thousands clustered together forming solid masses under stones near high water mark, on the ocean beach (Sealrock) S. Diego Cal. Feb'y 27, 1885
C. Orcuttii, Dall, Proc. U.S. Nat'l Mus., 1885, p. 541.

Star fish.
27. Find Feb'y 27, 1885, at Sealrock a ~~single arm~~ ^{which} of a star fish from which all but one arm had been lost and ^{which} was forming four new arms.

Price-List of
Bulbs to Am.
Trade.
28.

Terms; all billordue Meh. 1st. following sale. Double the rates per delivered.
100 charged in orders for less than 25. On orders ^{for} ^{of a kind} over 250 a discount
of 33 1/3%.

Rates to the
European trade
delivered in
New York.

<i>Allium falciifolium</i> ,	1.60	<u>1.50</u>
<i>serratum</i> , Wats.	1.60	<u>1.50</u>
<i>unifolium</i> , ^{Kell.} Wats.	1.60	<u>1.50</u>
<i>haematostictum</i> , Wats.	4.00	4.00
<i>fimbriatum</i> , Wats.	5.00	5.00
<i>Mulla maritima</i> , Wats.	3.15	3.00
<i>Brodiaea capitata</i> ,	1.60	<u>1.50</u>
<i>congesta</i> ,	2.50	<u>2.25</u>
(<i>Brevortia</i>) <i>coccinea</i> ,	5.00	<u>4.50</u>
<i>grandiflora</i> ,	1.75	<u>1.50</u>
<i>isoides</i> ,	1.75	<u>1.50</u>
<i>laxa</i>	1.75	<u>1.50</u>
<i>lactea</i> ,	1.75	<u>1.50</u>
<i>stellata</i> ,	3.50	<u>3.00</u>
<i>Orcuttii</i>	8.50	8.00
<i>minor</i> ,	2.50	<u>2.25</u>
<i>Camassia esculenta</i>	2.00	<u>1.50</u>
<i>Calochortus macrocarpus</i> ,	2.75	<u>2.25</u>
<i>corulea</i>	2.75	<u>2.25</u>
<i>venustus rosea</i> (true <i>venustus</i>),	4.75	<u>4.50</u>
^{venustus} (<i>luteus</i>) <i>oculatus</i> ,	5.00	<u>4.50</u>
<i>venustus purpurascens</i> ,	5.00	<u>4.50</u>
<i>venustus (luteus) citrinus</i> ,	5.00	<u>4.50</u>
<i>venustus</i> ,	2.50	<u>2.25</u>
<i>pulchellus</i> ,	2.80	<u>2.50</u>
<i>Mittallii</i> ,	5.50	<u>4.50</u>
<i>Palmeri</i> ,	8.00	8.00
<i>Weedii</i> ,	5.00	5.00
<i>Bloomeria aurea</i> , Kell.	3.50	3.00
<i>Clevelandi</i> , Watson	8.00	8.00
<i>Zygadenus Fremontii</i> , Torr.	3.50	<u>3.00</u>
<i>paniculatus</i> ,	3.50	<u>3.00</u>
<i>venenosus</i> ,	3.50	<u>3.00</u>
<i>Fritillaria biflora</i> ,	4.00	<u>3.00</u>
<i>lanceolata</i>	4.50	<u>3.00</u>
<i>recurva</i> ,	6.00	<u>4.50</u>

Bulbs. Continued.
28. Cont.

<i>Chlorogalum pomeridianum</i>	6.00	<u>4.50</u>
<i>angustifolium</i>	6.00	<u>4.50</u>
<i>parviflorum</i> , Watson.	6.00	6.00
<i>Erythronium grandiflorum</i> var. <i>albiflorum</i> .	3.00	<u>2.25</u>
" " <i>Smithii</i>	3.50	<u>3.00</u>

Note; The above prices underlined were set by Carl Purdy who agrees to furnish at special discount (see letters). Terms of exchange with Purdy are as follows. All a/c. due 1st day of June following sale. 1% discount per mo for cash before that date & same charged on deferred payments. A discount on all orders from 25 to 250 of 33 1/3%, and 50% discount on larger orders. 50% more charged the European trade, than the American trade. Carl Purdy also agrees to furnish *Lilium* Bulbs at the following rates, delivered in San Diego.

Purdy's special prices, no discount.

<i>Lilium Columbianum</i>	per 100 \$5.00	per 1000 \$50.00	10.00 8.00 80.
<i>Humboldtii</i>	6.	45.	12.00 9.00 100
<i>Pardalinum</i> v. <i>puberulum</i> ,	5.	45.	10.00 8.00 80
<i>Washingtoniana</i> .	6.	45	12.00 9.00 100.
<i>Parryi</i> , Watson.			
<i>Sedum variegatum</i> .			
<i>Saxifraga Parryi</i> ,			

Liliums delivered
in N.Y. per 100.
Per 1000 in N.Y.
No discount.

Asa Gray.

29.

C.O.D

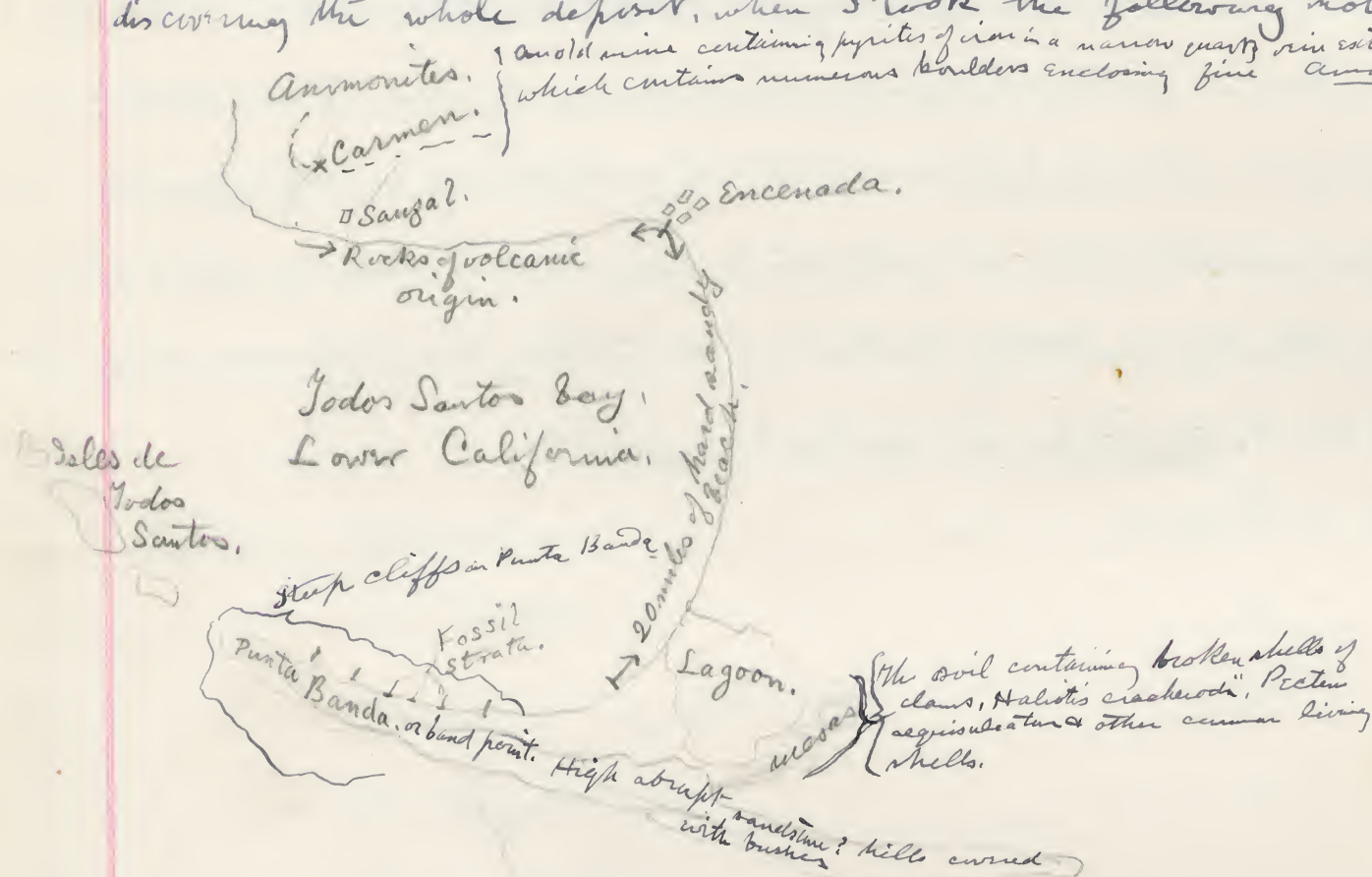
March 18, 1885, Dr. Asa Gray arrived from Cambridge Mass. via Los Angeles and took rooms at the Horton House. He was accompanied by his wife and Prof. W. G. Farlow. The 17th he called at our home while we were away at the Sweetwater cañon and late in the afternoon I returned his call, finding him suffering from a severe cold taken at New Orleans and made worse at Los Angeles. I found him very genial and friendly and he reminded me a little of my grandfather, Dr. Joseph Gray. The following day he was confined to his room so that I barely saw him, and the next I went to the Jamacha and secured some fresh flowers that I presented him in the evening and which seemed to please him, especially flowers of Asanthorintha. Sunday I brought him and Dr. Farlow over to our place, where he met all of our family and was shown fresh flowers, and later I carried them to call on my uncle's family. I loaned my copies of Science and the botanical papers to him, he not having seen them since leaving home. Monday my Mother called on Mrs. Gray and I had a very pleasant interview with Dr. Gray, and in the evening bid goodbye to them.

Fossils.

30.

Jan'y 25, 1883, in company with Dr. C. C. Perry, my father, and several others, I visited the north beach of Punta Banda, on Todos Santos Bay, Lower Cal., where a Mr. Tanshill pointed out some worn boulders on the beach that were a peculiar fossil. Several (2) specimens I (or we?) brought home and later in 1884 I sent them to Washington when they were handed to J. B. Marcon by Prof. Baird. Prof. Marcon thought it at first to be Conrad's *Tamiosoma*, but later concluded it was the type of a new genus.

In Sept. 1884, my father and I revisited the place and made further collections, discovering the whole deposit, when I took the following notes.



Ammonite strata
5' or 60
ft high

Steep bluff
5' or 60
ft high

Rocky
beach

1, 2, 3, 4 + 5 beds of the fossil.

Layer 4 to 6 ft. thick, sloping to the west at first exposure, & to the east in other places. Above (1) a bed of cobble stones & below clay; above the cobble stones, colored stratified sandstone, which is found both above & below the other exposures - 2-5. Strata sometimes with sandstone between dividing the bed of fossils a foot or more. Fossils exposed for 100 ft. or more in a place, reappearing several times at a distance of several hundred ft. apart; at last disappearing entirely, giving place to an unstratified formation (of porphyry?). The fossils just above high water mark. Large masses have been undermined & washed away, worn boulders of the fossil forming the great part of the rocks along the beach for some ways.

Rattle-snakes
31.

Crotalus

^{northern}
of southern and Lower California.

Yellow rattlesnake, the largest species

32

Crotalus

Black rattlesnake

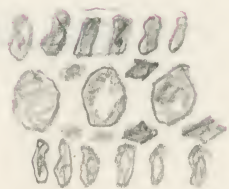
33

Crotalus

Desert or white rattlesnake.



tail



25 rows of dorsal scales
6 pairs of nostrils
20 gastroridges? back of anal plate which is entire.

King snake.

Ophibolus doliaatus,

Cuyamaca Mt. San Diego Co. Cal.

34

Sept. 1882, Red and white banded.

Pilot snake
35

Ophibolus getulus *bayli*
northern Lower California. Has been known to swallow rattlesnakes.

Several examples, San Diego Co. & in

23 rows dorsal scales; 23 gastroridges, 5.5 nostrils, anal plate entire, scales smooth.
Broad bands of brown and about 40 narrow bands of yellow, extending from belly. About
3 ft. long. Tail coming rapidly to a point.

Ball snake.
36.

Ptygophis *paysoni*

Common in San Diego Co. and in

northern Lower California. gastrosteges 226, urosteges 65. 40 rows of dorsal scales

India rubber snake.
37

Charina *bottae*, Blainv. *Boiclae*.

Racer
38

Bascanium

San Diego and Lower Cal.

Garter snake.
39.

Eutaenia

alt. 4000? ft. near U. S. boundary,

mountains of Lower Cal.

40

Phimothya *grahami*, B. & G.

Lower Cal. Apr. 1885

Squirrel.
41

Chipmunk! Animal 8 inches long including tail which is 3 inches.
Grayish above, whitish beneath, reddish on head and flanks. Two white stripes
along the sides of the back. Head large, chunked like the body, small
ears, well developed ^{cheek} pouches. Tail not bushy. Legs of equal length, short.
Thumb rudimentary, armed with a small flat nail, soles naked. 1 spec. from near
U. S. boundary, mountains of Lower Cal., Apr. 1885. James Harris.

Hale's Ind. Lament
42

The snake-skin that once I so sacredly wore
I will toss with disdain to the storm beaten shore
And its charms will I no longer invoke
But will dig up the hatchet and bend the oak bow
And by night & by day I will follow the fox.

Poem.
43.

The Flowers He Brought.

Dedicated to my husband.

The music of the rippling brooks,
And all the sweetness caught,
From tarrying in woody nooks,
Came with the flowers he brought.

Its presence lighted up the room,
And hallowed every thought,
And to my heart a richer bloom,
Came with the flowers he brought.

The morning light of May was there
With all its beauty fraught,
And low, a tender bud and fair,
Came with the flowers he brought.

Mrs. E. E. Everett,
by C. R. V.
San Diego, Calif. May, 1885.

44.

45

"The pine-tree dreameth of the palm,
The Palm-tree of the pine."

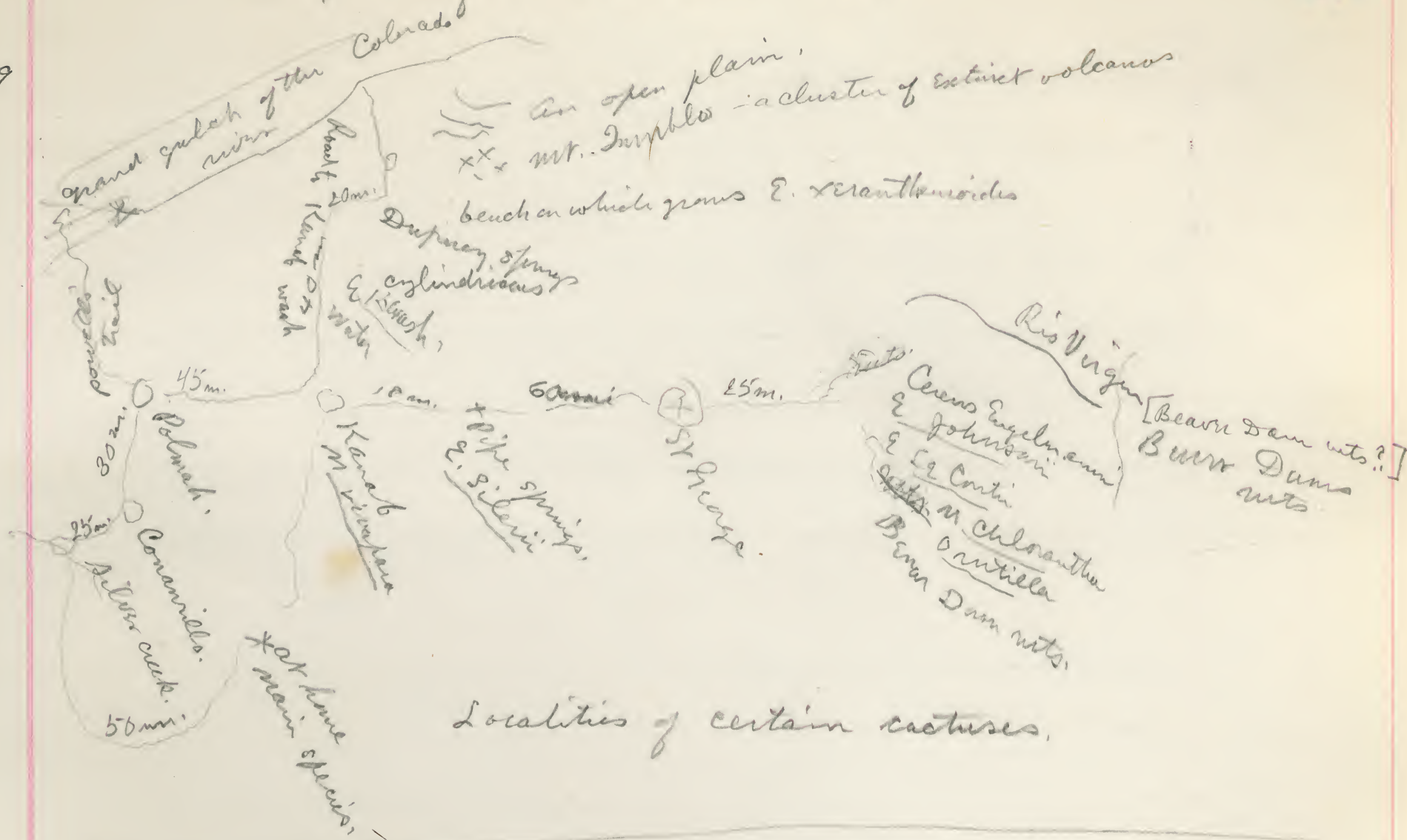
Lad Houghton's 'The Palm-tree and the Pine'. French's Household Book of Poetry.

46

47

48

49



Localities of certain cactuses.

50

- ✓ 51. *Ribes sanguineum*, Pursh. var. ?
San Diego.

- ✓ 52 *Ceanothus divaricatus*, Nutt. San Diego, Calif., near S. Jacinto, May 1882.

- ✓ 52a. *Idiospermum*, northward, L. Calif. (May 1886) and into the mountains (July, 1884).
C. spinosus, Nutt.

- ✓ 53 *Ceanothus verrucosus*, Nutt. Near Sausal, L. Calif., Apr. 10, 1882. San Diego.

- 53a. " " " Mesas, San Diego, Calif., Feb. 10, 1885.

- ✓ 54 *Ceanothus sordidatus*, H. & A. = *C. hirsutus* Nutt.
San Diego Calif.

- ✓ 55 *Thysanocarpus pusillus*, Hook.
San Diego.

- ✓ 56 *Bowlesia lobata*, R. & Pav.
San Diego

- ✓ 57 *Monardella lanceolata*, Gray.
Potrero, San Diego Co.

- ✓ 58 *Ceanothus crassifolius*, Torr.
San Bernardino, Calif.; W. G. Wright.

- ✓ 59 *Trifolium fucatum*, Lindl.
✓ Mesas, L. Calif., Apr. 1882.

- ✓ 60 *Medicago lupulina* L.
San Diego

- ✓ 61 *Melilotus parviflora*, Desf.
✓ Tijuana, L. Calif., Apr. 1882. Southward to Rosario.

- ✓ 62 *Dalea californica*, Watson.
Mohave desert, San Bernardino, Calif.; May 13, 1886.

- ✓ 63 *Astragalus didymocarpus*, Hooker & Arn. = *gambellianus* Sheldon
Vallecito, L. Calif., May 22, 1886; southward to Rosario and north to San Diego. (a) (b)

✓ 64 *Astragalus leucopsis* T. & G.

San Diego Calif.

✓ [65 *Astragalus oocarpus*, Gray.

✓ Near Encenada, L. Calif., Apr. 12, 1882.

✓ [66 *Astragalus dispermus*, Gray.

✓ Vallecito, L. Calif., Apr. 7, 1882.

67 *Sutherlandia frutescens*

Native of South Africa. In cultivation at San Diego, and perhaps? naturalized.

✓ [68 *Lupinus densiflorus*, Roth.

Jamacha, S. Diego Calif., May 7, 1882. J. H. Crentz.

✓ 69 *Lupinus truncatus* Nutt.

San Diego

✓ 70 *Lupinus micranthus* Dougl.

San Diego.

✓ 71 *Rumex hymenosepalus*, Torr.

✓ Guadalupe ranch, L. Calif., May 1886; northward to San Diego.

✓ [72 *Lupinus Douglasii*, Agardh. (*L. albicaulis* Dougl. on old list.)

✓ Near Encenada, L. Calif., Apr. 10, 1882.

✓ [73 *Lupinus affinis*, Agardh.

N. L. Calif., Apr. 10, 1882.

✓ [74 *Lupinus brevicaulis*, Watson.

Mohave desert, S. Bernardino, Calif., May 1882.

✓ [75 *Lupinus sparsiflorus*, Roth.

(*L. arizonicus* Wats. on old list, ^{Apr. 1882} from L. Calif.)

Olney valley, San Diego, Calif., Mch. 20, 1883.

✓ 76 *Lathyrus splendens*, Kell.

✓ Cuyamaca Lower Calif. Apr. 1882.

- 77 *Eriodictyon angustifolium* var. =
 " *intermedia* Parry ined. = *g. sessilifolium* Greene.
 near Sausal, Lower Calif. Apr. 1882.

- 78 *Lathyrus venosus*, Muhl.
 San Diego Cal.

- 79 *Lathyrus vestitus*, Nutt.
 San Bernardino, Calif., May, 1882.

- 80 *Eritrichium californicum*, DC. var. *subglochidiatum*, Gray.
 Mesas, S. Diego Calif. Mch. 24, 1883.

- [81 *Vicia esigua*, Nutt.
 San Diego, Cal.

- 82 *Prosopis pubescens*, Bth.
 Valle de los Palmas, Lower Calif. Apr. 1882.

- (old list) 83 *Eritrichium circumscissum* Gray. Mojave desert, San Bernardino, May, 1882.

- 83 *Andibertia Clevelandi*, Gray.
 Yocate, L. Calif. June 29, 1886.

- [84 *Rosa californica*, C. & S.
 San Diego, Calif., 1879.

- 85 *Rosa minutifolia*, Engelm. n. sp.
 Near Encenada de Todos Santos, L. Calif., Apr. 12, 1882.

- [86 *Adenostoma sparsifolium*, Torr.
 Mts. S. Diego, Calif., Aug. 1879.

- 87 *Potentilla glandulosa*, L.
 San Diego

- 88 *Purshia tridentata*, DC.
 Bayan pass, S. Bernardino Calif. May 10, 1882.

- 89 *Jauschueria californica* Pursh
 San Diego

90 *Oenothera biennis*, L.

San Diego.

[91 *Oenothera biortata*, Nutt. var. *Veitchiana*, Hook.
S. D. Cal.

92 *Oenothera californica*, Watson.

93 *Oenothera cheiranthifolia*, Horn.

ocean beaches near San Diego.

94 *Gauschneria californica*, Presl. (*Godetia epilabioides* Wats. San Diego, an old list.)

95 *Cleome integrifolia*, Nutt. (*Oenothera nicaantha* Horn. an old list from S. D.)

Falls, San Diego river, Calif., June 1883; - in fruit and flower, on bush.

96 *Arctostaphylos numularia*, Gray.

Central Calif.; C. C. Parry.

97 *Cypripedium humifusum*, Pursh.

Sta. Cruz, Calif.; C. C. Parry.

98 *Rhus ovata*, Watson, (n. sp. - previously ~~confounded~~ with *R. integrifolia*.)

Mission canyons, S. Diego, Calif., into the mountains to the desert border; Apr. 1883.

[99 *Oenothera dentata*, Cav. v. *grandiflora*, Watson.

Mohave desert, San Bernardino, Calif.; May 1882.

100 *Oenothera gauraeflora*, T. & G.

Mohave river, San Bernardino, Calif.; May 1882.

101 *Mentzelia gracilentia*, T. & G.

Palm valley, L. Calif.; Apr. 1882.

2 *Mentzelia albicaulis*, Dougl.

Lyon pass, San Bernardino, Calif.; May 1882.

3 *Lobelia splendens*, Willd.

Mts. San Diego, Calif.; Aug. 1882. Also in Cantiles canyon, L. Calif., Aug. 1883.

4 *Minulus glutinosus* t. ~~glutinosus~~ *punicens*, Gray. (= Green's *Diplacus punicens*, Nutt.)

5 *Minulus Megarrhiza californica*, Torr.

San Diego Calif.

6 *Cercis Emoryi*, Engelm.

monument, San Diego Cal.

7 *Cypripedium serpentina*, Engelm.

San Diego mesas.

- 108 *Opuntia occidentalis*, Engelm.
San Diego.
- 9 *Ribes speciosum*, Pursh.
San Diego.
- 10 *Saxifraga Puryi*, Torr.
San Diego, Cal., 1879. Oct. 30, 1882 - in flower. Dec. 31, 1883 - in leaf.
- 11 *Daucus pusillus*, Michx.
San Diego.
- 12 *Sanicula laciniata*, H. & A.
Mesas, S. Diego Calif., Mch. 1882.
- 13 *Cotyledon*. n. sp. (*Sanicula bipinnatifida* S. D. Gold list.)
Hansair ranch, 6000 ft. alt., L. Calif.: July 1883, in flower.
- 14 *Barum Gaudneri*, B. & H.
Cuyamaca mt., San Diego, Calif.: Aug. 1882; Sept. 1884.
- 15 *Oenothera Californica*, Watson.
S. D.
- 16 *Myosurus minimus*, L.
S. D.
- 17 *Pencedanum dasycarpum*, T. & G.
S. D.
- 18 *Dewrya arguta*, T. & G.
S. D.
- 19 *Sambucus glauca*, Nutt.
Sausal, L. Calif., May 20, 1886, and San Diego.
- 20 *Lonicera hispidula*, Dougl., var. *subspicata*, Gray, Mégnel.
San Diego Calif., June 20, 1884. (*L. conjungialis* Kel. gold list - a synonym.)
- 21 *Galium aparine*, L. v. *Vaillantii*, Koch. (*G. nuttallii* Gray gold list.)
San Diego, Calif., May 22, 1884.
- 22 *Galium angustifolium*, Nutt.
S. D. Cal.
- 23 *Galium Andrewsii*, Gray.
Smith out., S. Diego Calif., July 25, 1882. H. C. Orcutt.
- 24 *Plectritis macrocarpa*, T. & G. (= *Valerianella macrocarpa*, Gray.)
Guadalupe cañon, L. Cal.
- 25 *Anagalis arvensis*, L.
A. D.
- 26 *Dodecatheon Meadia*, L. (= *D. Clevelandi* Greene.)
A. D.

- ✓ 127 *Plantago major*, L.
Valle de los Viejos, S. Diego, Calif., Aug. 1882. Southward to Rosario, L. Calif., Apr. 1886.
- ✓ 128 *Plantago hirtella*, HBK.
Mesas, S. Diego, Calif., May 1882. Southward to S. Vicente, L. Calif., Apr. 1886.
- ✓ 129 *Plantago Patagonica*, Jacq.
Mesas, S. Diego, Calif., May 1882.
- ✓ 130 *Linaria Canadensis*, Dum.
San Diego, Calif., May 1882.
- ✓ 131 *Mimulus ~~glutinosus~~, Wendt, var. ~~purpureus~~, Gray.*
Mesas, S. Diego, Calif., 1879. Southward to San Felipe, L. Calif., May 1886.
- ✓ 132 *Mimulus cardinalis*, Dougl.
Mts. San Diego, Calif., July 1882.
- ✓ 133 *Mimulus brevipes*, Bth.
✓ Dry hills, L. Calif., May 1886. Southward to Rosario; northward to San Diego.
- ✓ 134 *Mimulus luteus*, L. (= *M. guttatus*, DC. fide Engelm.)
San Luis Rey valley, S. Diego, Calif., May 1882.
- ✓ 135 *Mimulus pilosus*, Watson.
✓ Cholles valley, S. Diego, Calif., June, 1882. Eastward to Campo. Southward to S. Felipe, L. Calif.
- ✓ 136 *Mimulus Fremontii*, Gray.
San Bernardino, Calif., May 1882.
- ✓ 37 *Collinsia Puryi*, Gray.
Cajon pass, S. Bernardino, Calif., May 12, 1882.
- ✓ 38 *Collinsia bicolor*, Bth.
San Diego.
- ✓ 39 *Antirrhinum Coulterianum*, Bth.
San Bernardino, Calif., May 1882.
- ✓ 140 *Antirrhinum Nivenianum*, Gray.
Near ^{San Luis Rey river} ~~San Diego~~, San Diego County, Calif., May 1882.
- ✓ 141 *Castilleja foliolosa*, H. & A.
Pt. Loma, S. Diego, Calif. Nov. 16, 1883.
- ✓ 142 *Scrophularia Californica*, Cham.
San Diego, Calif. San Rafael valley, L. Calif., Apr. 1885.^a
- ✓ 143 *Trichostema lanatum*, Bth.
San Diego.
- ✓ 44 *Phacelia Whittlavia*, Gray.
^{Diegoito,} San Bernardino, Calif., May 1882.
- ✓ 145 *Pentstemon cordifolius*, Bth.
San Diego.
- ✓ 146 *Pentstemon spectabilis*, 7 Huber. Smith Mt., S. Diego, Calif., July 1882. H. C. Orcutt.

- ✓ 147 *Pentstemon antirrhinoides*, Bth.
San Diego.
- ✓ 148 *Pentstemon centranthifolius*, Bth.
San Bernardino, Calif., May 1882.
- ✓ 149 *Verbena officinalis*, L.
San Diego
- ✓ 150 *Salvia columbariae*, Bth.
✓ L. Calif., Apr. 1882. South to Rosarito and east into the mts., San Diego, Calif.
- 51 *Cotyledon pulverulenta*, B. & H.
San Diego.
- ✓ 152 *Salvia carduacea*, Bth.
San Diego
- ✓ 153 *Andibertia polystachya*, Bth.
San Diego.
- ✓ 154 *Oenanthe californicum*, Torr.
Smith mt., S. Diego, Calif., July 1882, H. C. Orutt.
- 55 *Marrubium vulgare*, L. Hoarhound, Naturalized.
San Diego.
- ✓ 156 *Pogogyne nudiuscula*, Gray.
Mesas, S. Diego, Calif., Apr. 1883.
- ✓ 157 *Trichostema lanceolatum*, Bth.
Otay, S. Diego, Calif., Sept. 26, 1885.
- ✓ 158 *Acanthomintha ilicifolia*, Gray.
San Diego, Calif., abundant, southward to Salado, L. Calif.
- ✓ 159 *Monardella macrantha* Gray *lanceolata* Gray?
Mountains of San Diego Co.
- ✓ 160 *Andibertia stachyoides* Benth.
✓ Punta Banda, L. C. Jan. 1883.
- ✓ 161 *Andibertia stachyoides*, Bth.
San Diego.
- ✓ 162 *Andibertia incana*, Bth.
✓ Topo, L. Calif., Oct. 7, 1882.
- ✓ 163 *Stachys bullata*, Bth.
San Diego, Calif., May 1882.
- ✓ 164 *Nemophila insignis*
San Bernardino, Cal. May, 1882.
- ✓ 165 *Heliotropium curassavicum*, L.
San Diego.
- ✓ 166 *Lemmonia californica*, Gray, Yachapiti pass, Calif.; Dr. C. C. Parry.

- ✓ 167 *Amsinckia spectabilis*, F. & M.
San Diego.
- ✓ 168 *Pectocarya linearis*, DC.
San Diego.
- 69 *Ranunculus lyumbalaria*, Pursh.
Fall brook, San Diego, Calif., Nov. 1883.
- ✓ 170 *Harpagonella Palmeri*, Gray.
San Diego.
- 71 *Juncus robustus*, Watson. (*Eritrichium chorisianum* DC. S. D. gold list.)
S. D.
- ✓ 72 *Plagiobothrys Cooperi*, Gray. (*Eritrichium oxycaryum* Gray, S. D. gold list.)
San Diego Calif. May 3, 1882.
- 73 *Eritrichium micranthum*.
S. D.
- ✓ 174 *Emmenanthe penduliflora*, Bth.
S. D.
- ✓ 75 *Nema demissum*, Gray. *Conanthes demissus*
Cajon pass, San Bernardino, Calif.; May, 1882.
- ✓ 76 *Nemophila racemosa*, Nutt.
S. D.
- 177 *Abronia maritima*, Nutt.
Ocean beaches, San Diego, Calif.; Southward to Rosario, L. Calif. May 1886. (a.)
- ✓ 178 *Phacelia Parryi*, Torr.
Mesas and canyons, San Diego, Calif.; Southward to Rosario, L. Calif.
- ✓ 179 *Phacelia tanacetifolia*, Bth.
Tijuana, L. Calif. Apr. 6, 1882.
- ✓ 180 *Phacelia suffrutescens*, Parry.
Imecula canyon, San Diego, Calif.; C. C. Parry.
- ✓ 181 *Phacelia hispida*, Gray.
- ✓ 182 *Phacelia ciliata*, Bth.
Near Palm valley, L. Calif., Apr. 6, 1882.
- ✓ 183 *Phacelia Ivesiana*, Torr.
Cajon pass, San Bernardino, Calif.; May 1882.
- ✓ 84 *Phacelia Douglasii*, Torr.
- 85 *Silene californica*, Durand.
- ✓ 186 *Eriodictyon tomentosum*, Bth. *crassifolium*.
Pt. Loma, and Camano near San Diego, Calif., only.

- V 187 *Eriodictyon glutinosum* Bth.
mountains of Lower Calif.
- V 188 *Eriodictyon glutinosum*, Bth.
San Bernardino, Calif., May 12, 1882.
- V 89 *Gilia micrantha*, Steud.
Tijuana, L. Calif., May Apr. 15, 1882.
- V 90 *Gilia Parryae*, Gray.
Mohave desert, S. Bernardino, Calif., May 13, 1882.
- V 191 *Gilia inconspicua*, Dougl.
N. L. Calif., July 4, 1884.
- V 192 *Gilia brevicula*, Gray.
Mohave desert, S. Bernardino Cal., May 13, 1882.
- V 193 *Gilia pusilla*,
Chico Cal., 1883, Dr. C. C. Parry.
- V 194 *Gilia aurea*, Nutt.
Mohave slope, S. Bernardino Cal., May 13, 1882.
- V 195 *Gilia Lemmonii*, Gray.
- V 196 *Gilia tenuiflora*, Bth.
- V 197 *Gilia achillaeifolia*, Bth.
S. D., L. Cal., S. Bernardino.
- V 198 *Gilia dianthoides*, Endl.
San Diego
- V 199 *Gilia multicaulis* S. Bernardino.
- V 200 " *floccosa* S. D.
- V 201 " *tricolor* S. D.
- 202 " *intertexta* S. D.
- V 203 *Convolvulus Soldanella*, L., Ocean beach, San Diego, Calif.
- V 204 *Convolvulus Californicus*, Choisy.
S. D.
- V 205 *Cuscuta Californica*, Choisy.
S. D.
- V 206 *Datura meteloides*, DC.
S. D.
- V 207 *Nicotiana glauca*, Graham.
S. D. naturalized.
- V 208 *Nicotiana lewlandii*, Gray.
Lower Calif. Apr. 1882.

- ✓ 209 *Lycium californicum*, Nutt.
S. D.
- 210 *Lycium Andersonii*, v. *Wrightii*, Gray.
L. Cal.
- 211 *Lycium cooperi*, Gray.
Mohave desert, San Bernardino, Calif., May 1882.
- ✓ 212 *Solanum Xanti*, Gray.
S. D.
- ✓ 213 *Solanum nigrum*, L.
S. D.
- ✓ 214 *Solanum nigrum*, L. v. *Douglasii*, Gray.
S. D.
- 215 *Calandrinia maritima*, Nutt.
S. D.
- 216 *Asclepias crosa*, Torr. v. *Mohavensis*, Gray.
Lager pass, San Bernardino, Calif., May 1882.
- ✓ 217 *Asclepias mexicana* Cav.
S. D.
- 218 *Fraxinus dipetala*, H. & A. var. *trifoliata*, Torr.
L. Cal.: - Palm valley.
- ✓ 219 *Mirabilis californica*, Gray.
San Diego, Calif. A white form (a.) Jan'y 1, 1884.
- ✓ 220 *Abronia umbellata*, Lam.
S. D.
- ✓ 221 *Abronia villosa*, Watson.
Mohave desert, S. Bernardino, Calif., May 1882.
- ✓ 222 *Lehorizanthe fimbriata*, Nutt.
S. D.
- ✓ 223 *Lehorizanthe staticoides*, Bth.
S. D.
- ✓ 224 *Eriogonum fasciculatum*, Bth.
S. D.
- ✓ 225 *Eriogonum angulosum*, Bth.
S. Bernardino; Mojave desert, May 1882.
- ✓ 226 *Eriogonum Thurberi*, Torr.
Lower Calif.
- 227 *Erodium macrophyllum*, H. & A.
- ✓ 228 *Monolepis chenopodioides*, Moq.
Lower Calif.

- V 229 *Achenopodium californicum*, Watson.
S.D.
- V 230 *Atriplex microcarpa*, Watson.
San Diego, Calif. June 13, 1882.
- 31 *Cheilanthes fibullosa*, Davenport.
San Jacinto mts., San Diego, Calif.; Parish Bros.
- 32 *Notholaena Parryi*, Eaton.
Cantilero canyon, L. Calif.; Aug. 1883.
- ✓ 33 *Silybum marianum*, L.
✓ Vallecito, L. Calif.
- 34 *Phoradendron juniperianum*, Engelm. var. *leibocedri*, Engelm.
In fruit, Sept. 1884, on Cuyamaca mts., San Diego, Calif., on *Libocedrus decurrens*.
- 35 *Acalypha californica*, Bth.
L. Cal., Soconito, near San Quentin, May 7, 1886.
- 36 *Oxalis Wrightii*, Gray. San Diego, Calif.
Sausal, L. Calif. - May 1882; Miss F. E. Fish.
- V 37 *Euphorbia dictyosperma*, F. & M.
- V 38 *Euphorbia hirtula*, Engelm.
Julian, San Diego county, Calif., August 11, 1886.
- V 39 *Euphorbia misera*, Bth.
S.D.
- V 40 *Euphorbia polycarpa*, Bth.
S.D.
- V 41 *Platanus racemosa*, Nutt.
S.D.
- 2 42 *Eritrichium Chorisianum*, DC. (*Populus fremontii* S.D. - old list.)
- 43 *Eritrichium oxycarpum*, Gray.
- 44 *Juglans californica*, Watson.
San Bernardino, Calif., May 1882.
- 45 *Quercus agrifolia*, Moq. Mts. San Diego, and foot hills. Live oak.
245a. " " " Guadalupe canyon ^(L. Calif.) in fls., Apr. 1885, southward to La Grulla ^(and) into the mts.
- 2 46 *Quercus oblongifolia*, Torr. ~~L. Engelmannii Greene.~~
Potrero, San Diego, Calif.; Apr. 23, 1885, in flower. Northward through the county.
- 47 *Quercus Kelloggii* Newb.
Mts. S. Diego, Calif., Aug. 1879.
- 48 *Quercus dumosa*, Nutt. Mesas, S. Diego, Calif., into the mts. and northward through the county.
Also southward to near San Quentin bay, L. Calif.

249 *Quercus Emoryi*, Torr.

Acorns, Oct. 1882; Mts. L. Calif.

50 *Abies concolor*, Lindl.

Buyamaca Mts., S. Diego, Calif. Aug. 1879.

51 *Libocedrus decurrens*, Torr.

Buyamaca Mts., S. Diego, Calif. Sept. 1882. Also Smith Mts., northward.

52 *Ephedra californica*, Watson.

S. D.

53 *Juniperus occidentalis*, Hook.

Cajon pass, S. Bernardino Calif., May 1882.

54 *Pinus Coulteri*, Don. Buyamaca & Smith Mts., S. Diego, Calif.

Also on Inadalupe Mts., L. Calif. at an elevation of 4000 ft., June 1, 1883; H. C. Orcutt.

55 *Pinus Paryana*, Engelm.

Pinymountain and Hancock ranch, L. Calif.

56 *Chorizanthe procumbens*, Nutt.

S. D.

57 *Calochortus Weedii*, Wood.

S. D.

58 *Calochortus splendens*,

S. D.

59 *Calochortus Kennedyi*, Porter.

Mohave desert, S. Bernardino, Calif.; May 1882.

60 *Calochortus Benthani*, (*Brodiaea filifolia* of old list.)

Chico, Calif.; C. C. Parry.

61 *Hoskera capitata*, Bth.

S. D.

62 *Yucca baccata*, Torr. Mohavensis

S. D.

63 *Yucca brevifolia*, Engelm.

Mohave desert, S. Bernardino Calif.; May 1882, - in flower.

64 *Fritillaria biflora*, Lindl.

Mesas and canyons, San Diego, Calif.

65 *Oryzadenus Fremontii*, Torr.

San Diego.

66 *Bloomeria aurea*, Kell.

67 *Allium serratum*, Watson.

* 68 *Allium unifolium*, Kell.

69 *Eustoma exaltatum*, Griseb.

? (*Psilocarphus oregonus* Nutt. S. D. of old list.)

70 *Cucurbita perennis*, L.

Chlorogalum pomeridianum K

S. D. of old list.

271 *Agave Shawii*, Engelm.

Monument.

272 *Mesembryanthemum squilaterale*, Harw. Beach strawberry.

273 *Mesembryanthemum crystallinum*, L.

274 *Agolla caroliniana*, Willd.

275 *Arctostaphylos pungens*, HBK.
S. D.

276 *Arctostaphylos bicolor*, Gray.
S. D.

277 *Arctostaphylos diversifolia*, Parry.

Sanizms near San Diego, Calif., May 19, 1884 - in flower.

277(a) Near Sanzal, L. Calif., Jan. 26, 1883. - in leaf only.

277(b.) Jamul, S. Diego Cal. May 1879, in flower, O. N. Sanford. Recd of C. C. Parry.

278 *Arctostaphylos oppositifolia*, Parry.

salicifolia Parry det. in coll.

279 *Pholisma arenarium*, Nutt.

Chollas valley, 1882.

280 *Aphyllon Ludovicianum*, Gray.

Found growing near *Adenostema fasciculatum* in the mesas near San Diego, - apparently quite rare as I found only one plant, - May 30, 1882.

281 *Aphyllon californicum*, Gray.

S. D.

282 *Esculus Parryi*, Gray.

Discovered near Todos Santos bay, Lower California, Apr. 12, 1882, by Dr. C. C. Parry, L. G. Pringle, M. E. Jones, and C. R. Orcutt. Only 3 flowering specimens were found. Found as far south as Rosario, L. Calif., in Apr. 1886. Found in full bloom on 16th. of April 1885, in the vicinity of T. Santos bay and back among the hills and also found it in bloom as late as July, of the same year; the leaves deciduous at time of blooming, perhaps owing to the drought.

283 *Selaginella rupestris*, Spring.

S. D.

284 *Oxalis corniculata*, L.

S. D.

285 *Sisyrinchium bellum*, Watson.

S. D.

286 *Sedum variegatum*, Watson.

S. D.

287 *Opuntia Bernardina*, Engelm.

Soliva laucifolia Nutt. S.D. of old list.

288 *Opuntia Bigelovii*, Engelm.

Peucedanum leiocarpum Nutt. ? S.D. of old list.

289 *Tillaea minima*, Miers.

S.D. mesas.

290 *Opuntia prolifera*, Engelm.

S.D.

291 *Echinocactus viridescens*, Nutt.

Mesas, S. Diego, Calif., June 1, 1882.

292 *Cucurbita palmata*, Watson.

S.D.

✓ 293 *Woodwardia radicans*, Smith.

Smith Mt., S. Diego, Calif., July 25, 1882. H.C. Orcutt.

✓ 294 *Pteris aquilina*, L. var. ~~*laevigata* Bong.~~

Gayamaca Mt., S. Diego, Calif., Aug. 1879.

✓ 295 *Aspidium munitum*, Kaulf.

Gayamaca Mt., S. Diego, Calif., Sept. 2, 1882.

✓ 296 *Aspidium rigidum*, Swartz, var. *argutum*, Eaton.

S.D. Co.

✓ 297 *Asplenium Trichomanes*, L. v. *incisum*, Moore.

Near Encenada, L. Calif., Apr. 13, 1882.

✓ 298 *Adiantum capillus-veneris*, L.

L. Cal.

✓ 299 *Adiantum emarginatum*, Hook.

S.D.

- ✓ 300 *Cheilanthes myrsiphylla*, D. C. var.
 notes. L. C.
- ✓ 1 *Cheilanthes Clevelandii*, Eaton.
 S. D. Co.
- ✓ 2 *Gymnogramme triangularis*, Kaulf.
 L. C.
- 3 *Gymnogramme triangularis*, Kaulf. v. *viscosa*, Eaton.
 S. D.
- ✓ 4 *Notholaena Newberryi*, Eaton.
 S. D.
- ✓ 5 *Notholaena californica*, Eaton. (*Nicandida* Hook.) = *N. cretacea*.
 S. D.
- ✓ 6 *Woodsoia Mexicana*, Fee. ~~*W. obtusa* var. *glandulosa*?~~
 Cantillas Mts., L. Calif., Oct. 7, 1882.
- 7 *Eritrichium muricatum*
 S. D.
- ✓ 8 *Cheilanthes californica*, Nutt.
 S. D.
- ✓ 9 *Polypodium Californicum*, Kaulf.
 S. D.
- ✓ 10 *Pellaea Armitropus*, Hook.
 S. D.
- ✓ 11 *Pellaea andromedaefolia*, Fee.
 S. D.
- ✓ 12 *Ophioglossum nudicaule*, L. f.
 S. D.
- ✓ 13 *Tetracoccus dioicus*, Engelm. & Parry. n. g. et sp.
 Near Table Mt., L. Calif., Feb. 1883, Dr. C. C. Parry and H. C. Orcutt.
- ✓ 14 *Perezia microcephala*, Gray.
 S. D.
- ✓ 15 *Chaenactis artemisiaefolia*, Gray.
 L. C.
- ✓ 16 *Chaenactis Hantiana*, Gray.
 Mojave desert, May, 1882.
- ✓ 17 *Chaenactis tenuifolia*, Nutt.
 S. D.
- ✓ 18 *Layia elegans*, T. & G.
 S. D.
- ✓ 19 *Layia glandulosa*, B. & A.
 San Bernardino, Cal., May 12, 1882.

320 *Layia platyglossa* Gray.

S. D.

21 *Microseris platycarpa* Gray.

L. C.

3 22 *Eragrostis caulescens*, Gray. ~~var. sparsifolia~~

Mesas, S. Diego, Calif., Apr. 25, 1884.

23 *Sonchus oleraceus* L.

S. D.

24 *Sonchus*

25 *Malacothrix boulteri*, Gray.

Lower Calif., Apr. 6, 1882. Pt. Loma, S. Diego, Calif., Mich. 24, 1884.

26 *Malacothrix californica*, Gray.

S. D. - Pt. Loma.

27 *Pentachaeta aurea*, Nutt.

S. D.

28 *Senecio californicus*, DC.

San Diego, Calif., May 4, 1882.

29 *Eriogonum foliosum* var. *stenophyllum*, Gray.

San Diego, Calif., June 12, 1882.

30 *Helianthus petiolaris*, Nutt.

S. D.

31 *Corethrogyne filaginifolia*, Nutt.

S. D.

32 *Stephanomeria virgata*, Bth.

S. D.

33 *Mesembrianthemum nodiflorum*

S. D.

34 *Artemisia californica*, Less.

S. D.

35 *Trixis frutescens*,

L. Calif., Apr. 14, 1882.

36 *Aplopappus linearifolius*, DC.

Cajon Pass, S. Bernardino Calif., May 12, 1882.

37 *Coreus Engelmannii*, Pavy.

(*Baccharis* sp. on old list.)

S. D.?

38 *Coreus gummosus*, Engelm.

(*Baccharis glutinosa* Pers. on old list.)

39 *Coreus maritimus*, Jones, Ann. Natl. : Todos Santos Bay, L. Calif., Southward. 1882.

(*Tessaria borealis* T. & G. on old list.)

340 *Achillea Millefolium* L.

S. D.

41 *Encelia farinosa* Gray.

Box Springs, S. D. Co. May, 1882.

42 *Barbarea vulgaris* R. Br.

mountains of Baja Cal.

43 *Aster tortifolius*,

San Bernardino (Mojave desert), Calif., May 13, 1882.

44 *Parophyllum gracile*, Bth.

Chollas valley, S. Diego, Calif., June 15, 1882.

45 *Lathenia glabrata*, Lindl.

Temecula, S. Diego Calif., May 11, 1882.

46 *Aphanisma blitoides*, Nutt.

S. D.

47 *Leptosyne maritima*, Gray.

Monument between U. S. & Mexico, at San Diego, Calif., Apr. 15, 1879.

48 *Leptosyne Douglasii*, DC.

Palm valley, L. Calif., Apr. 10, 1882.

49 *Cotula coronopifolia*, L.

San Luis Rey river, S. Diego Calif., May 1882.

50 *Anthemis cotula* S. D.

51 *Eragrostis calliopsideus* Gray.

Mojave desert

52 *Syntrichopappus fremontii* Gray.

San Bernardino.

~~52 *Syntrichopappus fremontii*~~

Mojave slope, S. Bernardino: Calif., May 13, 1882.

53 *Iva Hayesiana*, Gray.

S. D.

54 *Grindelia robusta*

S. D.

55 *Antirrhinum Nuttallianum*, Bth.

Ocean beach, S. Diego, Calif., June 30, 1882.

56 *Viguiera laciniata*, Gray.

S. D.

57 *Eurotia lanata*, Moquin.

Mojave desert.

58 *Baeria gracilis*, Gray.

Palm valley, L. Calif., Apr. 15, 1882.

59 *Gnaphalium californicum*, DC. S. Diego Cal. June 12, 1882.

360 *Salvia pubens*, Gray.

L. Cal.

61 *Bahia confertiflora*, Gray. = *Eriophyllum confertiflorum*, Gray.
Mesas, S. Diego, Calif., May 4, 1882.

62 *Thamnia bipinnatifida*, Nutt.

S. D.

63 *Atriplex canescens*, James. ♂

San Diego Cal., June 30, 1882.

64 *Hemizonia fasciculata*, T. & G.

S. D. June, 1882.

65 *Chaenactis tenuiflora*, Nutt. var. (= *C. Oerthii*, Greene, inedit.)

S. D. June, 1882, on beach.

66 *Lepigonum macrothecum*, F. & M.

S. D.

67 *Clarkia elegans*, Lindl.

S. D.

68 *Nemacladus ramosissimus*, Nutt.

S. D.

69 *Nemacladus longiflorus*, Gray.

Colton, Cal. May 1883. C. C. Parry.

70 *Tetradymia spinosa*, H. & A.

Lower pass, S. Bernardino, Calif., May 13, 1882.

71 *Loiselia Matthewii*, Gray.

Mojave desert, May, 1882.

72 *Pentacæna ramosissima*, H. & A.

=? " *polycnemoides* Bth. S. D.

73 ~~*Simmondsia californica*, Nutt.~~ *Anisocoma acaule*

San Bernardino, May, 1882. (*Anisocoma acaule* S. B. in old list.)

74 *Tropidocarpum gracile*, Hook.

S. D.

75 *Thysanocarpus curvipes*, Hook.

S. D.

76 *Orthocarpus purpurascens*, Bth.

Mesas and valleys, S. Diego, Calif.

Lower Calif., Apr. 5, 1886.^a

77 *Oxytheca perfoliata*, T. & G.

Mojave desert, San Bernardino, Calif., May 13, 1882.

78 *Euphorbia Palmeri*, Engelm.

(*Glyptoplena marginata* S. B. in old list.)

not S. D.

79 *Beleperone californica*, Bth. Palm valley, L. Calif., southward to Rosario: Apr. 1882 + 1886.

380 *Apiastrum angustifolium*, Nutt.

S. D.

81 *Nemacaulis Nuttallii*, Bth.

Tijuana, Low. Calif., Apr. 6, 1882. Also at San Diego on sandy flats or river bottoms.

82 *Monardella linoides*, Gray.

Palm valley, L. Calif., June 3, 1883.

83 *Adolphia Californica*, Watson.

S. D.

84 *Eriophyllum multicaule*, Gray. ^{formerly called} (*Actinolepis Wallacei* Mohave desert)

Mohave desert, S. Bernardino Cal., May 13, 1882.

85 *Breweria minima*, Gray. (= *Convolvulus pentapetaloides*, L.)

L. C.

86 *Amorpha Californica*, Nutt.

S. D. - Sweetwater valley.

87 *Eryngium petiolatum*, Hook.

S. D.

88 *Yucca Whipplei*, Torr.

S. D.

89 *Yucca whipplei*

into Lower Cal.

90 *Hemizonia tenella*, Gray.

S. D.

91 *Centauria solstitialis*, L.

San Diego, Calif. June 12, 1882.

92 *Eremocarpus setigera*, Bth.

S. D.

93 *Eulobus Californicus*, Nutt.

S. D.

94 *Bressa cretica*, L.

S. D.

95 *Allium haematociton*, Watson. (~~*Simmondsia Californica* on old list.~~)

S. D.

96 *Chorizanthe Californica*, Gray.

S. D.

97 *Philibertia Torreyi*

S. D.

98 *Polygonum aviculare*, L. Hanson's ranch, Low. Calif., July 30, 1883.

99 *Silene Gallica*, L.

San Diego Calif.

400 *Brodiaea filifolia*, Watson. (= *Hookera filifolia*, Watson.)

Chico Valley - Chico valley, July 7, 1882 - alt. 2000

1 *Xanthium strumarium*, L.

S.D.

2 *Heteromeles arbutifolia*, Rose.

San Diego Calif., June 30, 1882.

3 *Juncus carnosus*, Gray.

Chico valley, S. Diego Calif., June 1882.

4 *Rumex salicifolius*, Wein. San Diego, Calif., March, 1883.

S.

5 *Eriogonum elongatum*, Roth.

Mts. San Diego, Calif.

6 *Eriogonum gracile*, Roth.

S.D.

1882.

7 *Gordyanthus filifolius*, Nutt.

S.D.

8 *Hookera minor*, Watson.

S.D.

9 *Gilia micrantha*

S.D.

10 *Echinopspermum Greenei*, Gray.

S.D.

11 *Koeberlinia glabra*, Don.

Mesas, S. Diego, Calif., June 21, 1882.

12 *Malva borealis*, Wallem.

S.D.

13 *Erythraea venusta*, Gray.

S.D.

14 *Helianthus dealbatus*, Gray.

L. Cal.

15 *Oncidium dumosum*, Hook.

Hills near San Diego, Calif.; southward into L. Calif. as far as S. Vicente (Apr. 1886).^a

16 *Pterostegia drymaroides*

S.D.

17 *Hemithysia californica* B. & H.

S.D.

18 *Godetia tenella*, Watson. (not *G. quadrivulvata* Speck)

S.D.

19 *Lotylepis lanceolata*, B. & H.

San Diego Cal. June 12, 1882.

420 *Chamaebatia foliolosa*, Roth.

S. D.

21 *Evernia vulpina* (L.) Ach. Gayamaca Mts., San Diego Co., Calif. Sept. 1882.
and Aug. 1879. C.R.D.

22 *Rubus Nutkanus*, Moc.

S. D. mts.

23 *Leurothous integrissimus*, H. & A. Soap-bush. ?? "needs study" Parry.

Smith Mts., S. Diego, Calif., July 1882; H. C. Orcutt.

24 *Pyrola aphylla*, Smith.

Smith Mts., S. Diego Calif., July 25, 1882, H. C. Orcutt.

25 *Monardella nana*, Gray.

Smith Mts., S. Diego Calif., July 1882, H. C. Orcutt.

26 *Aquilegia truncata*, Fr. & M.

Gayamaca Mts., July 1882.

27 *Bigelovia Palmeri*, Gray.

28 *Wyethia coriacea*, Gray.

Mts. S. D.

29 *Scutellaria Bolanderi*, Gray.

Smith Mts., S. Diego, Calif., July 1882; H. C. Orcutt.

30 *Hypericum Scouleri*, Hook.

Mts. S. D.

31 *Lythrum alatum* Pursh.

S. D.

32 *Minulus macrochatus*, Dougl.

(= *M. inodorus*, Greene.)

Smith Mts., S. Diego, Calif., July 1882; H. C. Orcutt.

33 *Monardella macrantha*, Gray.

Smith Mts., S. Diego Calif., July 1882, H. C. Orcutt.

34 *Epilobium spicatum*, Lam.

Mts. S. D.

35 *Gilia*

L. Cal.

36 *Cystopteris fragilis*, Bernh.

Smith Mts., July 1882. - H. C. Orcutt.

37 *Eriogonum molestum*, Watson. Smith Mts., San Diego, Calif., July 1882, H. C. Orcutt.

38 *Pinus Torreyana*, Parry.

39

446 *Madia elegans*, Don.

Smith Mt., S. Diego Calif. July 23, 1882, H.C. Grunt.

41 *Hosackia glabra*, Torr.

San Diego, Calif. - abundant on mesas and hills; June 21, 1886. Southward to Rosario, L. Calif.

42 *Hydrocotyle prolifera*, Kell.

S.D.

43 *Louscuta salina*, Engelm.

S.D.

44 *Nemophilla Menziesii*

San Diego.

45 *Juncus bufonis*, L.

San Diego.

46 *Jessaria borealis*, G. & G. (= *Pluchea borealis*, Gray.)

S.D.

47 *Helianthus californicus*, DC.

S.D.

48 *Oxytheca trilobata* Gray.

San Diego.

49 *Stemodia durantifolia*, Swartz.

San Diego.

50 *Hesperocaulis tenella*

S.D.

51 *Cyperus*

S.D.

4 52 *Symphoricarpos racemosus*, Michx.

S.D. mts. (Cuyamaca Mt.)

53

54 *Eriogonum nudum*, Dougl.

Soda Springs, San Diego, Calif. Aug. 1882.

55 *Eriogonum Wrightii*, Torr.

Guadalupe ranch, Lower Calif. Jan. 20, 1883.

56 *Eriogonum fasciculatum*, Bth. Mts., San Diego, Calif. Aug. 1882.

57 *Microseris platycarpa*, Gray.

58 *Cyperus aristatus*, R. & Br.

S.D.

4 59 *Cotyledon linearis* Greene? San Juan L.C. May 10, 1886.

460 *Hosackia prostrata*, Nutt.

San Diego, Calif., May 1882. Southward to Rosario, L. Calif. (a.)

61 *Hibiscus denudatus*, Gray.

✓ Cantiles canyon, L. Calif.; July, 1884.

62 *Urtica holosericea*, Nutt.

S.D.

63 *Sanchoa aleraceus*, L. (*Artemisia ludoviciana* S.D. of old list)

64 *Hosackia oblongifolia*, Bth.

Jamacha, San Diego, Calif. Aug. 29, 1882. Also found in the mountains, L. Calif.

65 *Helenium puberulum*, D.C.

mts. S.D. - Cuyamaca

66 *Gayophytum ramosissimum*, Gray.

S.D.

67 *Hemicarpha subguarusa*, Nutt.

Mission valley, San Diego, Calif., June 1883.

68 *Ranunculus californicus*, Bth.

Cuyamaca mts., S. Diego Calif. Sept. 1882.

69 *Lilia fleribunda*

70 *Lemma Valdiviana*, Phil.

S.D.

71 *Samolus Valerandi*, L. var. *Americana*, Gray.

Valle de los Viejos, S. Diego Calif., Aug. 30, 1882.

472 *Bromus ciliatus*, L. *oreuttianus* v. *grandis* Shear, U.S. Dep. ag. Div. Agrost. Bull. 23, p. 43, [3 gl 1900.]

La Monte, S. Diego Calif., June 25, 1883.

473 *Elymus condensatus*, Presl.

(*Danew pusilus* var. - old list.)

Shollas valley, S. Diego, Calif., June 1, 1882.

74 *Aster* mts. S.D.

75 *Lilaea subulata*, HBK.

S.D.

76 *Nicotiana attenuata*, Torr.

Pine valley, S. Diego Calif., Sept. 2, 1882.

77 *Senecio Douglasii*, DC.

Tijuana, S. Diego, Calif., Aug. 2, 1882.

478 *Cotyledon* [*Stylophyllum oreutti* ?]

Collected at Ensenada, L. Cal. by Miss F.E. Fish. June 2, 1883.

79 *Aster spinosus*, Bth.

480 *Rhododendron occidentale*, Gray.

Smith Mt., S. Diego Calif., July 18-28, 1882. H.C. Quett.

81 *Rubus ursinus*, C.F.B.

82 *Adenostema fasciculatum*, H.A.A.

83

84

85 *Monardella macrantha*, Gray, var.

Buyamaca mts., S. Diego, Calif., Sept. 6, 1882.

86 *Urtica urens*, L.

87 *Eriogonum glandulosum*, Nutt. ("or very near it," side Watson), (= *E. apiculatum*, Watson, Proc. Am. Acad. XVII, p. 378. side Perry.)
Buyamaca mts., S. Diego, Calif., Aug. 1882.

88 *Equisetum robustum*, L.

89

90 *Alnus oblongifolia*, Nutt.

91 *Pentstemon heterophyllus*, Lindl.

Buyamaca mts., S. Diego, Calif., Sept. 3, 1882.

92 *Lupinus Chamissonis*, Esch.

93

94

95 *Koeleria cristata* Pers.

San Diego Cal.

96 *Verbena ciliata*, Bth.

Cantiles mts., L. Calif., Oct. 1882.

97 *Geranium viscosum*, L.

San Diego, Calif.

98 *Agropyrum repens*, L. var. a.

Potrero, San Diego, Calif., July 24, 1883.

99 *Eriogonum nudum*, Dougl. var. *pauciflorum*, Watson.

570 *Quercus chrysolepis*, Liebm. Guyanaca & Smith mts., S. Diego, Calif. Aug. 1879.

580a. " " " Hanson's ranch, L. Calif., July 1885.

1 *Mentha ~~torreyana~~*, L. Canadensis, L.

Pine valley, S. Diego, Calif., Sept. 1882.

2

3 *Stipa setigera*, Presl.

Chollas valley, S. Diego, Calif., June 13, 1882.

4 *Distichlis maritima*, Raf.

Chollas valley, S. Diego, Calif., June 13, 1882.

5 *Elymus ~~condensatus~~*, Presl. var. *triticoides*, Kunth. Nutt.

Chollas valley, San Diego, Calif., June 13, 1882.

6 *Polypogon Montspeliensis*, Desf.

San Diego, Calif., June 13, 1882.

7 *Aristida cretacea*, Vasey, n. sp.

Hanson's ranch, L. Calif., July 50, 1883.

8 *Paspalum distichum*, L.

La Monte (Near El Cajon valley), San Diego, Calif., June 25, 1883.

9 *Juncus dubius*, Engelm.

10

11 *Bromus erectus*, Huds.

Northem L. Calif., Apr. 15, 1882. ~~Tigiana valley~~

12 *Monanthochloa litoralis*, Engelm.

San Diego bay shores. Collected by Dr. Geo. Engelmann. 1880.

13 *Melica poaeoides*, Torr. Nutt.

Barisito, L. Calif., May 29, 1883.

14 *Andropogon saccharoides*, Schwaartz.

Barisito, L. Calif., May 29, 1883.

15 *Quercus lobata*, Mill.

Julare, Calif.; Mch. 22, 1883: C.C. Parry.

16

17

18 *Agrostis exarata*, Trin. var.

San Diego, Calif., May 30, 1882.

19

520 *Epicampus rigens*, Bth.

San Diego, Calif., May 30, 1882.

21 *Festuca myurus*, L.

San Diego, Calif., May 3, 1882.

22 *Hordeum jubatum*, L.

San Diego co., Calif., May 14, 1882.

23 *Phalaris canariensis*, L.

San Diego, Calif., May 9, 1882.

24

25 *Phalaris intermedia*, Bosc.

✓ Lower California, Apr. 15, 1882.

26 *Phalaris intermedia*, Bosc. var. *angusta*, Chapm.

City of San Diego, Calif., May 30, 1882.

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31

32 *Alyssum maritimum*, L.

33

34 *Ambrosia pumilla*, Nutt.

35 *Pinus Lambertiana*, Dougl.

36 *Pinus ponderosa*, Dougl.

37 *Prunus demissa*, Walp.

38 *Lehara foetida*, A. Br.

39

✓ 540 *Panicum dichotomum*, L.
Falls, S. Diego Calif., June 25, 1883.

✓ 41 *Psilocarpus tenellus*, Nutt.
Mesas, S. Diego, Calif., May 1883.

42 *Arctostaphylos tomentosa*, Dougl.

✓ 43 *Arctostaphylos glauca*, Lindl.
Cuyamaca mt., S. Diego Calif., Sept. 6, 1882.

44

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46

47

✓ 48 *Eusonymus occidentalis*, Nutt.
Smith mt., S. Diego, Calif., Aug. 1882; H. C. Orcutt.

49 *Vitis californica*, Bth.
banyans among the hills, S. Diego, Calif. Not found far south of the U.S. line.

50 *Cornus californica*, C. A. Meyer.

✓ 51 *Cotyledon edulis*, Brewer. ?
Cuyamaca mt., S. Diego Calif., Sept. 5, 1882.

✓ 52 *Rhamnus californica*, Esch. Mts. S. Diego, Calif., July 1882, in fruit; H. C. Orcutt.
Mts. of L. Calif., - in flower, June 1885. "Wild coffee."

53

54

55 *Psoralea orbicularis*, Lindl.

56

57

✓ 58 *Bercocarpus parvifolius*, Nutt.
Smith mt., S. Diego Calif., July 18-28, 1882, H. C. Orcutt.

✓ 59 *Yosackia Purshiana*, Bth. Smith mt. and elsewhere, San Diego, Calif.; July 1882, H. C. Orcutt.

- 560 *Trifolium tridentatum*, var. *obtusiflorum*, Wats.
Smith Mt., S. Diego, Calif., July 25, 1882. H. C. Oerth.
- 61 *Trifolium involucreatum*, Willd.
Smith Mt., S. Diego, Calif., July 25, 1882. H. C. Oerth.
- 62 *Lilium Humboldtii*, R. & L.
- 63 *Lilium Parryi*, Watson.
- 64 *Asclepias eriocarpa*, Roth.
Smith Mt., S. Diego, Calif., July 25, 1882. H. C. Oerth.
- 65 *Veratrum californicum*, Dur.
- 66 *Eriogonum vamineum*, Dougl. (Also sent to Watson as No. 643, from Chollas valley.)
Cuyamaca Mt., San Diego, Calif., Sept. 1882.
- 67 *Epilobium coloratum*, Muhl.
- 68
- 69 *Spartina stricta*, Roth.
Chollas valley salt flats, San Diego, Calif., July 31, 1882.
- 70
- 71 *Basella subinclusa*, D. & H.
- 72
- 73
- 74 *Mammillaria Hordridgii*, Scheer.
San Diego, Calif., Nov. 6, 1883.
- 75
- 76 *Phragmites communis*, Trin.
Vieja, San Diego Co., Calif., Sept. 7, 1882.
- 77 *Coralea macrostachya*, DC.
- 78 *Erythraea Douglasii*, Gray
- 79 *Polygonum nodosum*, Pers. Jucay, San Diego, Calif., Aug. 1882.

580 *Thasus Parryi*, Torr.

81

82

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84

85 *Hosackia micrantha*, Nutt.

Mesas, San Diego Calif.; abundant May 1, 1884. Southward to Rosario, L. Calif. ⁽²⁾

86

87 *Nicotiana Bigelovii*, Wats.

88

89

90

91 *Mimulus floribundus*, Lindl.

Pine valley, S. Diego, Calif., Sept. 1, 1882.

92

93 *Artemisia dracunculoides*, Pursh.

Near Campo, S. Diego, Calif., Oct. 4, 1882.

94 *Thermopsis californica*, Watson.

Cuyamaca mt., San Diego, Calif., Aug. 1879.

95

96 *Ranunculus hebecarpus*, var. *pusillus*, Bz.

97

98 *Pentstemon ternatus*, Torr. Cuyamaca mt., S. Diego, Calif., Sept. 2, 1882.

99

600

Oniscus californicus, Gray.

Carrizito, L. Calif., May 29, 1883.

1

Physa ancillaria Say.

Hartland Vermont. C.R. Orent.

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Cheilanthes myriophylla, Desv.

Cantilero mts., L. Calif., Oct. 8, 1882.

17

18

Gilia tenuifolia, Gray.

19

Asclepias erosa, Torr.

Japa, L. Calif., Oct. 5, 1882.

620

✓ 21 *Leordylanthus Arcuttianus*, Gray.

Tijuana, L. Calif., May 28, 1883.

✓ 22 *Aster canescens*, Pursh.

Near U.S. boundary, mts. L. Calif., Oct. 5, 1882.

✓ 23 *Bigelovia gracilens*, Gray.

Topo, L. Calif., Oct. 5, 1882.

✓ 24 *Henckera rubescens*, Torr.

Topo, L. Calif., Oct. 5, 1882.

✓ 25 *Artemisia Ludoviciana*, Nutt.

✓ 26 *Artemisia tridentata*, Nutt.

✓ 27 *Hymenopappus luteus*, Nutt. (= *H. filifolius*, Hook.)

Mts. L. Calif., Oct. 7, 1882.

✓ 28 *Bigelovia spathulata*, Gray.

Topo, L. Calif., Oct. 7, 1882.

✓ 29 *Nitrophila occidentalis*, Wats.

Las Juntas, L. Calif., July 3, 1884.

30

✓ 31 *Hyperus laevigatus*, L.

San Diego, Cal., June 24, 1882.

32

✓ 33 *Franseria Hookeriana*, Nutt.

Japa ranch, mts. L. Calif., Oct. 6, 1882.

34 *Bowlesia lobata*, R. & S.

34 *Berberis Fremontii*, Torr.

36 *Gilia effusa*, Gray.

✓ 37 *Dalea Arcuttii*, Watson.

Pinyon forests, L. Calif., Oct. 1882.

38

✓ 39 *Quercus Palmeri*, Engelm. (= *Q. dumii*, Kell.), Mts. L. Calif., northward into San Diego county, July 1885.
Acorns, Oct. 1882.

- 646 *Quercus* ^{*fungens,*} ~~*Palmeri*~~, Engelm.
Mts. L. Calif., July, 1885. Acorns, Oct. 1882, Northward into the mts. of San Diego.
- 41 *Echinocactus* *Oreuthii*, Engelm.
Palm valley, L. Calif., June 3, 1883.
- 42 *Eriogonum* *foliosum*, Watson. n. sp. /
Pinyon forest, mts. L. Calif.; and Hanson's ranch. July 1883. H.C. & C.R. Arnett, Oct. 1882.
- 43 *Prosopis* *juliflora*, DC.
Palm valley, L. Calif. June 4, 1883 - in flower. Cantiles canyon, July 8, 1884 - in fruit. ^(a) San Diego, also.
- 44 *Eriogonum* *Baileyi*, Watson, tomentose form.
Cantiles mts., L. Calif., Oct. 1882.
- 45
- 46 *Phacelia* *hispidula*, Gray.
- 47
- 48
- 49 *Gilia* *densifolia*, Bth. var.
Yps., L. Cal. Oct. 6, 1882.
- 50 *Dorsia* *Baileyi*, Watson.
- 51
- 52 *Bigelovia* *brachylepis*, Gray.
Camps, S. Diego Calif. Oct. 4, 1882.
- 53 *Tetradymia* *comosa*, Gray.
- 54
- ✓ 55 *Sonchus* *tenerimus*, L.
Pt. Loma, S. Diego, Calif., Mch. 24, 1884.
- 56 *Calandrinia* *Menziesii*, Hook.
- 57 *Triglochin* *maritimum*, L.
Salt flats, San Diego, Calif. Apr. 1883.
- ✓ 58 *Sonchus* *asper*, Vill.
Pt. Loma, S. Diego, Calif., Mch. 24, 1884.
- ✓ 59 *Sonchus* *oleraceus*, L.
Olney valley, S. Diego, Calif., Apr. 17, 1884. Edible according to Miss Fish.

660 *Tellina cymbalaria*, Walp.

✓ 61 *Baeria nuntica*, Gray.

Chollas, S. Diego Calif., Mch. 17, 1884.

✓ 62 *Baeria gracilis*, Gray, var. *tenerrima*, Gray.

Pt. Loma, S. Diego, Calif., Mch. 12, 1884.

63

64 *Monardella Pringlei*, Gray.

65

66

✓ 67 *Acacia Greggii*, Gray.

Falls San Diego, Calif., June 1883. San Rafael valley, L. Calif., July 10, 1885. (a.)

✓ 68 *Hamizonia floribunda*, Gray.

69 *Mentzelia dispersa*, Watson,

Desert borders, San Bernardino, Calif., W. G. Wright.

70 *Verbena prostrata*, R. Br.

✓ 71 *Bouteloua ~~curtipendula~~*, Gray. *racemosa*, Lag.

Topo, N. L. Calif., Oct. 8, 1882.

✓ 72 *Erigeron Canadense*, L.

73 *Eriogonum Baileyi*, Watson (tomentose form).

Mts. L. Calif., Oct. 1882.

✓ 74 *Saxifraga Virginiensis*, Mx. = *S. reflexa*, Hook.

Moist, steep banks, canyons, San Diego Calif. Mch. 11, 1884.

75 *Heymenothria Wrightii*, Gray.

✓ 76 *Abutilon Strutsii*, Watson. (= *A. Lemmonii*, Watson.)

Tijuana, L. Calif., June 4, 1883. Near S. Quentin Bay, L. C., Apr. 22, 1886.

✓ 77 *Gilia multicaulis*, Benth.

Mesas and city of San Diego, Calif., Mch. 8, 1884.

✓ 78 *Gilia multicaulis*, Bth.

San Diego City, Cal., Feb. 25, 1884.

✓ 79 *Aplopappus squarrosus*, H. & A.

680 *Mulla maritima*, Watson.

681

82 *Prunus ilicifolia*, Walp.

83 *Calochortus albus*, Dougl.

84 *Symphoricarpos mollis*, Nutt.

buganaca Nutt.

85

86 *Ammannia latifolia*, L.

Sweetwater valley, San Diego, Calif.: in fruit, Nov. 13, 1882; in flower, July 1884.

87

88

89 *Portulaca oleracea*, L.

90 *Trifolium microcephalum*, Nutt.

San Diego Calif., Mex. 24, 1884.

91 *Trifolium ciliatum*, Nutt.

Chollas valley, S. Diego Cal. Apr. 10, 1884.

92

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96

97 *Eriogonum Parishii*, Watson.

Mts. S. Calif., Oct. 1882.

98 *Lathyrus venosus*, Muhl. var. *californicus*, Watson.

S. Calif., Apr. 1882.

99

✓ 700 *brevis phoeniceus*, var. *Pacificus*, Engelm.

Launym near Todos Santos bay, L. Calif. Jan'y 26, 1883. - in flower.

1 *Asclepias subulata*, Decne.

2

3 *Frauseria chenopodiifolia*, Bth.

4

✓ 5 *Andibertia stachyoides*, Bth. (blue flowers).

Punta Banda, L. Calif. Jan'y 1883.

6

✓ 7 *Ptelea aptera*, Parry.

Punta Banda, near Todos Santos bay, 1883, Jan'y; Dr. Parry, W. B. Wright, H. C. & C. R. Orcutt.

✓ 8 *Senecio Californicus*, DC.

Shores Todos Santos bay, L. Calif., Jan. 25, 1883.

9 *Parietaria debilis*, Frost.

San Diego, Calif., Feb. 6, 1884.

✓ 10 *Ribes viburnifolium*, Gray, n. sp.

Vicinity of Todos Santos bay, L., Calif. Jan'y 22, 1883.

11

12

13 *Nolina Palmeri*, Watson. Sotole.

✓ 14 *Cyperus Michauxianus*, Schmidt.

Mission valley, S. Diego, Calif., June 24, 1883.

15

✓ 16 *Erythraea Douglasii*, Gray.

17

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720

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22 *Chaenactis lanosa*,
 Bolton, Calif. Apr. 26, 1882. D. Cleveland.

23

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32

33 *Perityle acmella*, Gray.

34 *Physalis pubescens*, L.

735 *Ellisia chrysanthemifolia*, Bth.

La Jolla, San Diego Cal. Apr. 1891.

36 *Ellisia membranacea*, Bth.

37

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740

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49 *Menodora scoparia*, Engelm.

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54 *Trifolium monanthum*,San Bernardino, Calif. (alpine), coll. by W. R. Wright.

55

56

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58

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760

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64

65

66

67 *Acacia Greggii*, Gray.

San Diego river falls, San Diego, Calif., June, 1883. San Rafael valley, L. C., July 1885. (a)

68

69 *Luzula comosa*,

S. Bernardino, Calif., (coll. by W. G. Wright.)

70

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72

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76 *Marsilia vestita*,San Bernardino, Calif. W. G. Wright. Sweetwater valley, S. Diego, Calif.

77

78

79

780

Ranunculus alnifolius

Wright

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86 *Scutellaria angustifolia*, Pursh.

Smith mts., S. Diego, Calif.; July 1882. H. C. Orcutt.

87

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93 *Juncus rugulosus*, Engelm.

S. Bernardino, Calif. (Coll. by W. L. Wright.)

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Eliocharis cuspidata,
San Bernardino, Calif., W. G. Wright.

16

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19

820

- 21 *Cercocarpus parvifolius*, Nutt.
N. L. Calif. Apr. 10, 1882.
- 22 *Leupressus Inadalonpensis*, Watson.
(Apr. 1882 + Jan. 1883.)
Sausal, L. Calif. - in rough, almost inaccessible canyons; southward and north to San Diego hills,
[at Janel mts. &c.]
- 23
- 24
- 25
- 26 *Lactaria chilensis*, Parry.
- 27 *Populus trichocarpa*, G. & G.
Central Calif., Apr. 1883, C. C. Parry.
- 28 *Peraphyllum ramosissimum*, Nutt.
Berkeley, Cal., Apr. 5, 1883, C. C. Parry.
- 29 *Orthocarpus pusillus*, Bth.
Berkeley, Calif., Apr. 5, 1883; C. C. Parry.
- 30 *Juniperus californica*, Carr.
Mts. L. Calif.; Oct. 1882.
- 31 *Batis maritima*, L.
- 32 *Capsella Bursa-pastoris*, L.
- 33 *Phacelia ramosissima*, Dougl.
- 34 *Gilia floccosa*, Gray.
Tijuana, L. Calif., May 28, 1883.
- 35 *Abutilon aurantiacum*, Watson. n. sp.
Tijuana, L. Calif.; June 4, 1883; H. C. & R. Orcutt.
- 36 *Scirpus riparius*, Spreng. *setaceus*, L.
Tijuana, L. Calif., May 28, 1883. abundant.
- 37 *Gilia liniflora*, Bth. var. *pharnaceoides*, Gray.
Cayuse, L. Calif., May 29, 1883.
- 38 *Phacelia Oruttiana*, Gray.
- 39 *Calochortus Palmeri*, Watson.

840 *Horkelia californica* var. *paucifoliolata*, Wats.

41 *Oenothera micrantha*, Hornes.

42 *Eriophyllum Wallacii*, Gray.
Guadalupe mt., L. Calif., June 1, 1883.

43 *Collomia glutinosa*, Gray.

44 *Gilia Orcuttii*, Parry.

Guadalupe mt., L. Calif., June 1, 1883: H.C. & C.R. Orcutt.

45 *Mimulus Palmeri*, Gray, probably fide Watson. (= *M. androsaceus*, Curren.)

Guadalupe mt., L. Calif., June 1, 1883.

46 *Gilia micrantha*, Steud.

Guadalupe mt., L. Calif., June 1, 1883.

47

48 *Godetia epilobioides*, Watson.

49 *Gilia stracheyoides*, Steud.

50 *Gilia inconspicua*, Dougl.

51 *Gilia floribunda*, Gray.

Guadalupe mt., L. Calif., June 1, 1883. H.C. Orcutt.

52 *Madia filipes*, Gray.

Guadalupe mt., ~~S. Doug~~ L. Calif., June 1, 1883.

53 *Helianthemum scoparium*, Nutt.

Guadalupe mt., L. Calif., June 1, 1883.

54

55 *Astragalus Sonorae*, Gray.

Guadalupe valley, L. Calif., June 1883; - in fruit. Also Hanson's ranch, L.C., in flower, April 1885.

56 *Helianthus gracilentus*, Gray.

57 *Lupinus gracilis*, Agardh.

58 *Iris angustifolia*, var.

Guadalupe ranch, L. Calif., May 31, 1883.

59 *Encelia visida*, Gray.

860

61 *Juncus scirpoides*, Meyer.

Palm valley, L. Calif., May 30, 1883.

62 *Borrhavia viscosa*, Gray.

63

64 *Epipactis gigantea*, Lindl.65 *Phacelia circinata*, Jacq.66 *Krynitzkia micrantha*, var. *lepidota*, Gray.

Palm valley, L. Calif., June 3, 1883.

67 *Polycarpon depressum*, Nutt.

Palm valley, L. Calif., June 3, 1883. Also at San Diego, southward to Rosario.

68

69 *Krynitzkia barbiger*, Gray.

Palm valley, L. Calif., June 3, 1883.

70

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72

73

74 *Erigeron incompertus*, Gray.

Near U. S. boundary, L. Calif., May 29, 1883. Apr. 8, 1885, (a).

75 *Amblyopappus pusillus*, H. & A.

Barisito, L. Calif., May 29, 1883. Southward to S. Quentin Bay; abundant around S. Diego.

76

77

78 *Physalis crassifolia*, Bth.

79

880 *Lupinus hispidissimus*, Bth.

81 *Specularia biflora*, Gray. ("red-head form," Watson)
Palm valley, L. Calif. May 29, 1883.

82

83 *Mentzelia micrantha*, T. & G.

84

85 *Phlox* ~~*Douglasii*, Hook. & Arn.~~ *mana*, Nutt.
Mts. L. Calif.

86 *Astragalus stenophyllus*, T. & G.

Near Hanson's ranch, L. Calif., Apr. 21, 1885; in flower.

87

88 *Cordylanthus Nevinsii*, Gray.

Hanson's ranch, L. Calif., July 30, 1883.

89 *Oenothera strigulosa*, T. & G.

90 *Lupinus littoralis*, Dougl.

Hanson's ranch, L. Calif., June 29, 1883.

91 *Boerhaavia densiflora*, Watson.

92 *Pentstemon labrosus*, Hook. & G.

Mts. L. Calif., July 1885. Mts. of S. Diego, northward.

93 *Pentstemon parviflorus*, Nutt. var. *incanus*, Gray.

Mts. L. Calif., July 27, 1883.

94 *Thalictrum polycarpum*, Watson.

95 *Rhus aromatica* ^{Ait.} var. *indivisa*, Watson.

Mts. L. Calif., Apr. 1885; in flower.

96

97 *Cassia bovesii*, Gray.

Cantills canyon, L. Calif. Aug. 2, 1883 - in fruit.

98 *Polygonum Hartwegii*, Gray.

Hanson's ranch, Lower Calif., July 1883.

99 *Caulanthus glandulosus*, Hook. (var.?) *laevis*, Watson.

Hanson's ranch, L. Calif., July 1883.

900 *Garrya flavescens*, var. *Palmeri*, Watson.

1 *Palmerella debilis*, Gray.

2 *Erythraea armata*, Watson. (see No. 17.)

3 *Euphorbia polycarpa*, Bth., var.
Cantilero canyon, L. Cal. Aug. 2, 1883.

4 *Potamogeton natans*, L.

5 *Horkelia californica*, H. & S. var. *Potentilla Clevelandi*, Greene, n. sp.
Hansen's ranch, L. Calif., July 30, 1883.

6 *Bastillea affinis*, H. & S. probably.
Hansen's ranch, L. Calif., July 30, 1883.

7

8 *Echidocarya californica*, Watson.

9 *Verbena littoralis*, HBK.
Hansen's ranch, L. Calif., July 1883.

10

11

12 *Galium Rothrockii*, Gray. ♀
Mts. L. Calif., July 29, 1883.

13 *Hulsea californica*, T. & G.

14

15 *Atriplex bracteosa*, Watson.

16 *Atriplex canescens*, James.
N. L. Calif., July 26, 1883.

17 *Melilotus alba*, L.

18 *Apocynum cannabinum*, L.

19 *Leucogonthe laciniata*, Torr. Mts. Lower Calif., July 1884, and near Campo, San Diego Calif.
Also at falls of San Diego river, S.D. Calif., June, 1883.

- ✓ 920 *Ambrosia psilostachya*, DC.
Hansen's ranch, L. Calif. July 9, 1884.
21
- ✓ 22 *Eriogonum foliosum*, Watson, n. sp.
Cantiles mts., L. Calif.
- ✓ 23 *Arenaria alsinoides*, Willd.
Mts. L. Calif.
- ✓ 24 *Geranium caespitosum*, James.
Mts. L. Calif. - Hansen's ranch; July, 1883 & July, 1885.
25
- ✓ 26 *Menodora scabra*, Gray.
27
- ✓ 28 *Monardella lanceolata*, Gray, var.
Potrero, San Diego, Calif.: July 1883.
- ✓ 29 *Monardella lanceolata*, Gray,
Hansen's ranch, L. Calif., July 1883.
- ✓ 30 *Gilia virgata*, Steud.
Hansen's ranch, L. Cal. July 29, 1883.
- ✓ 31 *Thamnosma montanum*, Torr.
The Cantiles, L. Calif., July, 1884, - in fruit. Also in Oct, 1882, same locality.
- ✓ 32 *Bastillea foliolosa*, H. & A.
33
- ✓ 34 *Fouquieria splendens*, Engelm.
Cantiles canyon, L. Calif., Aug. 1883, - in flower.
- ✓ 35 *Eriogonum Orcuttianum*, Watson.
Cantiles canyon, L. Calif. Aug. 1883.
- ✓ 36 *Krynitzkia ramosissima*, Gray.
Cantiles canyon, L. Calif., Aug. 1883.
- ✓ 37 *Astragalus Orcuttianus*, Watson, n. sp. = *A. tricarinatus*, Gray. Parry.
Cantiles canyon, L. Calif., Aug. 1883 - in fruit.
- ✓ 38 *Pentachaeta aurea*, Nutt.
Hansen's ranch, L. Calif., July 7, 1885.
- ✓ 39 *Ononis Drummondii*, var. *aculeescens*, Gray. Hansen's ranch, L. Calif.

- ✓ 940 *Petunia parviflora*, Juss.
- ✓ 41 *Sesuvium portulacastrum*, L.
- 42 *Potentilla rivalis*, Nutt. var. *millegrana*, Watson.
- ✓ 43 *Agave Pringlei*, Engelm. ined.
Hansen's ranch, L. Calif., at an elevation of 6000 ft., July 26, 1883 - in flower
- 44
- ✓ 45 *Thelypodium Wrightii*, Gray.
Cautiles mts., L. Calif., Oct. 1882.
- 46 *Echinocactus cylindraceus*, Engelm. ?
Near S. Rafael, L. Calif., July 30, 1883.
- 47 *Lyrocarpa Palmeri*, Watson.
- 48 *Gutierrezia californica*, T. & G.
- 49
- 50 *Krameria canescens*, Gray.
- 9 51 *Agrostis scabra* Willd. var. ?
Smith Mt. S. D. Co. - H. C. Creuth, July 1884.
- ✓ 52 *Helianthus californicus*, DC.
Cautiles canyon, L. Calif., July 7, 1884.
- 53 *Verbena ciliata*, Bth.
- ✓ 54 *Pinus Fremontii*, Torr. (= *P. monophylla*, Torr. & Fremont.)
Desert border, mts., L. Calif.; Aug. 1883.
- 55 *Eriogonum trichopodium*, Torr.
- 56 *Agrostis*
Potrero, S. Diego Co. Cal. July 12, 1884
- 57 *Agrostis grandis* Trin. ?
Smith Mt. S. D. Co. Cal. Aug. 1884. - H. C. Creuth
- 58 *Stellaria media*, L.
Falls of S. Diego river.
- 15-9 *Agrostis*
Potrero valley, S. Diego Co. Cal. July 12, 1884.

960

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67 *Aster divaricatus*, Nutt.

San Bernardino Calif., Sept. 1883.

68 *Lessingia glandulosa*, Gray.

69

9 70 *Aplopappus Palmeri*, Gray.

San Bernardino, Calif., Nov. 1883.

71 *Polygonum Persicaria*, L.; San Bernardino, Calif., Nov. 5, 1883.72 *Pluchea camphorata*, DC.73 *Baccharis Emoryi*, Gray.74 *Eriogonum parviflorum*, Bth.75 *Brickellia Californica*, Gray.76 *Cheilanthes Cooperae*, Eaton.

Colton, Calif.

77 *Lemna trisulca*, L.

78

79

980

81 *Chenopodium ambrosioides*, L.

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85 *Umbellularia californica*, Nutt.86 *Pellaea Wrightiana*, Hook.87 *Cheilanthes viscida*, Davenport.88 *Bigelovia Menziesii*, Gray.

Mission valley, S. Diego Calif., Oct. 1, 1883.

89 *Baccharis sarothroides*, Gray.90 *Hymenoclea monogyra*, Gray.

Mission valley, S. Diego, Calif., Oct. 1, 1883.

91 *Gutierrezia Euthamiae*, var. *diversicarpa*, Gray.

92

93 *Baccharis Douglasii*, Torr.94 *Centunculus minimus*, L.

Mesas, S. Diego, Calif., Apr. 21, 1884.

95

96 *Monardella villosa*, Bth. var.

Potrero, S. Diego, Calif., July 1883.

97 *Antirrhinum subsessile*, Gray.

Chollas valley, S. Diego, Calif., June 20, 1883. Southward to Rosario, L. Calif., near the coast.

98 *Antirrhinum Orcuttianum*, Gray.

Chollas valley, S. Diego, Calif., June 20, 1883. Southward to J. Santos bay, L. Calif.; eastward into the mts.

99

1060 *Erigeron foliosus*, Nutt. var. *tenuissimus*, Gray.
Hansois ranch, L. Calif. July 30, 1883.

1

2 *Trifolium fucatum*, Lindl.
Yuma, L. Calif., Apr. 15, 1882.

3 *Trifolium tridentatum*, Lindl.
Yuma, L. Calif., Apr. 15, 1882.

4 *Trifolium gracilentum*, G. & G.
Yuma, L. Cal. Apr. 6, 1882.

5 *Trifolium microcephalum*, Nutt.
Hansois ranch, L. Calif., July 30, 1883.

6

7 *Hosackia strigosa*, Nutt.

8

9

10 *Hosackia rigida*, Bth.
Hansois ranch, July 10, 1884.

11 *Eriodictyon angustifolium*
Hansois ranch, Lower Cal. 6000 ft. elevation. July 30, 1883.

12

13

14 *Plagiobothrys tenellus*, Gray ("probably - no fruit ripe")
Mexas, S. Diego Calif. Mch. 24, 1883.

15 *Amaranthus californicus*, Watson.

16 *Limnosa aquatica*, L.
Hansois ranch, L. Calif.; July 1884.

17 *Nasturtium curvisiliqua*, Nutt. v. *lyratum*, Watson

18 *Orthocarpus purpurascens*, Bth. var. *alba*,
Chollas valley, S. Diego, Calif., April, 1882.

19

✓ 1020 *Gnaphalium Sprengelii*, H. & A.

San Diego, Calif., June 13, 1882.

✓ 21 *Baeria gracilis*, Gray.

Mesas, S. Diego Calif., Apr. 6, 1883.

22 *Krynitzkia Jonesii*, Gray. Probably = 1281, young. (Specimen in Gray Herbarium.)

Mts. L. Calif., near U. S. boundary, 1884.

23 *Nelium ericetorum* Muell.

Near Heidelberg, Germany, coll. by Carl H. Eigenmann.

✓ 24 *Sisymbrium reflexum*, Nutt.

Mesas, S. Diego Calif., Feb. 26, 1884.

25

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27

28

29

30 *Clematis paniculata*, Nutt.

31

✓ 32 *Silene antirrhina*, L.

Chollas valley, S. Diego, Calif., Mch. 11, 1884.

33 *Dichondra repens*, Forst.

✓ 34 *Erodium Texanum*, Gray.

Mesas, S. Diego, Calif., Mch. 1884. Southward, to S. Vicente, L. Calif., - Apr. 1886.

✓ 35 *Geranium barolinianum*, L.

San Diego, Calif., in canyons. Apr. 1884.

✓ 36 *Draba cuneifolia*, Nutt.

San Diego Calif., Feb. 7, 1884 (Chollas valley).

37 *Lepidium dictyotum*, Gray.

✓ 38 *Lepidium Menziesii*, DC.

Sweetwater valley, S. Diego, Calif., Apr. 17, 1884.

✓ 39 *Lepidium intermedium*, Gray.

Pl. Loma, S. Diego Calif., Mch. 24, 1884.

1040 *Capsella divaricata*, Walp.

41

42 *Elatine brachysperma*, Gray.

Mesas, S. Diego, Calif.; - Spring 1884. Southward, Tijuana, L. C., and S. Tomas, Apr. 1886.

43

44

45

46 *Antirrhinum filipes*, Gray.

Mission canyon, San Diego, Calif., May 8, 1884.

47 *Plantago Bigelovii*, ?

Mesas, S. Diego, Calif., Apr. 1884.

48 *Salix lasioplepis*, Bth.

Chollas valley (J. H. Crutt's place), S. D. Cal. Apr. 4, 1884.

49

50

51

52 *Salicornia ambigua*, Michx.

San Diego Cal. Mich. 24, 1884.

53 *Microseris Lindleyi*, Gray.

San Diego Calif., Mich. 25, 1884.

54

55 *Gnaphalium palustre*,

Mesas, S. Diego, Calif., May 8, 1884.

56 *Gnaphalium purpureum*, L.

Mesas, S. D. Cal. Apr. 10, 1884.

1057 *Alopecurus geniculatus*, L.

Mesas, San Diego city, Calif., May 22, 1884.

1058 *Agrostis asperifolia*, Trin.

Chollas valley, S. Diego, Calif., May 25, 1885.

1059 *Bromus maximus*, Desf.

Pr. Loma, S. Diego, Calif.

1060

1061 *Avena barbata*, Brot.

Chollas valley, S. Diego, Calif. May 24, 1884.

62 *Avena fatua*, L.

Mission canyon, S. Diego Calif., May 8, 1884.

63 *Festuca tenella*, Willd.

Vicinity of San Diego, Calif. May 7, 1884.

64 *Trisetum barbatum*, Steud.

Chollas valley, S. Diego Calif., Mch. 18, 1884.

65 *Stipa eminens*, Cav.

Chollas valley, S. Diego, Calif., Mch. 18, 1884.

66

67 *Lolium temulentum*, L.

Chollas valley, San Diego, Calif.; May 24, 1884. Poison cereal, introduced.

68 *Stipa coronata*, Thunb.

Chollas valley, S. Diego Calif., May 26, 1884.

69 *Eriocharis palustris*, R. Br.

San Diego, Calif., May 26, 1884.

✓1071

1070

Aristida bromoides, HBK.No. 1070
Poa ercuthiana Vasey
Chollas valley, C.

Chollas valley, S. Diego Calif., May 26, 1884.

✓1070

1071

Poa (*Atripis*) *tenuifolia*, var. (*near Atripis*, perhaps *Atripis scabrella*, Thunb. Vasey)

Chollas valley, S. Diego Calif., May 26, 1884.

72 *Deschampsia gracilis*, Vasey, n. sp.

Miniature lagoons, Mesas S. Diego, Calif., May 28, 1884.

73 *Festuca microstachys*, Nutt.

Mesas, San Diego, Calif., May 8, 1884.

74

75 *Carex triquetra*, Booth.

Pt. Loma, San Diego, Calif., Apr. 2, 1884.

76 *Fagonia californica*, Bth.

Tijuana, L. Calif.; June 1884; southward to Rosarito, May 1886.

77 *Gilia pusilla*, Bth.

Tijuana, L. Calif., July 1, 1884.

78 *Gilia atractylorides*, Steud. *Navaretia* - *atractylorides* (Gray).

Tecate, L. Calif., July 1, 1884.

79 *Aster spinosus*, Bth.

1080 *Pentstemon Cleavelandi*, Gray.

Paters, S. Diego, Calif., July 1884.

81 *Pterostegia drymarivoides*, F. & M. Japa, L. Calif., July 1884.

82 *Psoralea Californica*, Watson.

Pinjone forest, L. Calif., July 1884.

83 *Krynitzkia circumscissa*, Gray.

Pinjone forest, L. Calif., July 1884.

84 *Galium Rothrockii*, Gray ♂

Mts. L. Calif., July 5, 1884.

85 *Abutilon Newberryi*, Watson.

Cantiles canyon, L. Calif.; July 1884.

86 *Physa humerosa* Gld.

Salton, Riverside Co. Cal. 1888.

87 *Phacelia ~~crathnii~~ Gray* *affinis*, Gray, n. sp.

Mts. L. Calif., July 5, 1884.

88 *Dysodia porophylloides*, var.

Cantiles mts, L. Calif., July 7, 1884.

89 *Sphaeralcea Emoryi*, Torr.

Pinjone forests, Japa &c., mts. L. Calif.; July 1884.

90 *Gilia glutinosa*, Gray.

Mts. L. Calif., near Ticate. July 3, 1884.

91 *Erythraea annata* Watson. seeds.

Cantiles cañon, Lower California. 1883.

92 *Gilia densifolia*, var. *elongata*, Gray.

93 *Anodonta Oregonensis* Lea.

Salton Cal. 1888.

94 *Mimulus Fremontii*, Gray.

Mts. L. Calif.; July 1884.

95 *Eschscholtzia Californica*, Cham. var. (= *E. peninsularis*, Greene, n. sp.)

Near Campo, U. S., mts. L. Calif., July, 1884.

96 *Lupinus truncatus*, Nutt. (Belden's Lupine.)

Ticate, L. Calif., July 1, 1884.

97

98 *Saponaria Vaccaria*, L.

Chollas valley, S. Diego, Calif., May 19, 1884.

99 *Vesicaria Fendleri*, Gray, var.

Japa canyon, L. Calif., July 9, 1884.

1100 *Silene platyota*, Watson.

Topocanyon, L. Calif., July 9, 1884.

1 *Briekellia atractylodes*, Gray.

Cantiles canyon, L. Calif., July 7, 1884.

2 *Irisia angustifolia*, var. *latiuscula*, Gray.

Cantiles canyon, L. Calif., July 8, 1884.

3 *Franseria flexuosa*, Gray. n. sp.

Cantiles canyon, L. Calif., July 8, 1884.

4 *Hyptis Emoryi*, Torr.

Cantiles canyon, L. Calif., July 1884.

5 *Amaranthus albus*, L.

6 *Zizyphus lycioides* var. *canescens*, Gray.

Cantiles canyon, L. Calif., July 1884.

7 *Malacothrix lelandii*, Gray.

Las Juntas, L. Calif., July 3, 1884.

8 *Amsinckia tessellata*, Gray.

Japa and San Rafael valleys, L. Calif., Apr. and July, 1884-5.

9 *Mammillaria micromeris*.

El Paso, Texas, C. R. Coville, May 1886.

10 *Viguiera Parishii*, Greene.

Cantiles canyon, L. Calif., July 7, 1884.

11 *Aristida divaricata* Humb. & Bonpl.

Mts. N. L. Cal. Sept. 1884.

12

13 *Gilia* *navarctica* ^{*peninsularis*, Greene} ~~*atractylodes* Steud.~~ (Gray).

Hansair ranch, L. Calif., July 9, 1884.

14 *Mentzelia albicaulis*, Dougl.

15 *Rumex salicifolius*, Wein. mts. Lower Calif., July 1884.

16 *Pentstemon Clevelandii*, Gray.

Cantiles mts., L. Calif., July 1884. Oct. 1882.

17 *Pentstemon Palmeri*, Gray.

Cantiles canyon, L. Calif., July 1884. Near S. Quentin bay, Apr. 22, 1886. (a.)

18 *Convolvulus longipes*, Watson, var.

19 *Boisdieuallia densiflora*, Watson.

- 1120 *Arenaria Douglasii*, G. & G.
Mts. N. L. Calif., July 3rd, 1884.
- 21 *Brickellia frutescens*, Gray.
Cantiles ~~canyon~~ ^{mts.} L. Calif., July 6, 1884.
- 22
- 23 *Clarkia rhomboidea*, Dougl.
Mts. L. Calif.
- 24 *Arabis perfoliata*, Lam.
- 25 *Gilia Lemmonii*, Gray.
- 26 *Gilia micrantha*, Steud.
Las Juntas, L. Calif., July 3, 1884.
- 27 *Krynitzkia intermedia*, Gray.
Piñone forest, L. Calif., July 1884.
- 28 *Nemophila Menziesii*, H. & A. *pedunculata* Dougl. in part fide Chandler Bot Gaz 1902, 208.
Japa, Lower Cal. July 5, 1884.
- 29 *Astragalus disperuus*, Gray.
- 30 *Eschscholtzia minutiflora*, Watson. *E. modesta*, Greene (Perry)
Cantiles mts., L. Calif. July 8, 1884.
- 31 *Arthocarpus attenuatus*, Gray.
Hansuis ranch, L. Calif. July, 1884.
- 32 *Peristyle Californica*, Bth. var. *nuda*, Gray.
- 33 *Lupinus Orcutti*, n. sp. Watson.
Cantiles mts., L. Calif. July, 4, 1884.
- 34 *Lupinus densiflorus*, Bth.
Japa, mts. L. Calif. July 5, 1884.
- 35 *Stephanomeria exigua*, Nutt.
Cantiles mts., L. Calif., July 8, 1884.
- 36 *Scirpus lacustris*, L.
Mts. L. Calif., July 9, 1884, near Hansuis ranch.
- 37 *Imperator brevifolia*, Vasey.
Cantiles canyon, L. Calif., July 5, 1884.
- 38 *Grimbystylis*
Cantiles canyon, L. Calif., July 7, 1884. (New to Calif.)
- 39 *Scirpus sylvaticus*, L.
Mts. of N. Lower Calif. July 9, 1884.

1140 *Opuntia tuna* var. 1 Imported from Italy by Mr. T. S. Brandegee; cultivated in Italy for its fruit, with the 2 next.
Upper plant.

1141 Same, var. 2. Imported with last by T. S. Brandegee. Middle plant

1142 Same, var. 3. Imported with last by T. S. Brandegee. Lower plant Brandegee's garden.

1143 *Opuntia* (*Platopuntia*)

Mexico City, C.R. Gentry 1894 (L.C. Nursery No. 26).

1144 *Andropogon macrostachyus*, Michx.

Cantiles canyon, L. Calif. July 7, 1884. (Also sent to Dr. Vasey under the No. 1163.)

1145 *Gbilaria rigida*, Thunb.

Cantiles canyon, L. Calif. July 7, 1884.

1146 *Aristida purpurea*, Nutt. var.

Topo, Lower Calif., July 19, 1884.

1147 *Oryzopsis cuspidata*, Benth.

Cantiles mts., L. Calif., July 5, 1884.

1148

1149 *Juncus robustus*, Watson.

Tijuana, L. Calif., June 30, 1884. Southward to S. Quentin bay.

1150 *Juncus balticus*, Dith.

Tijuana, L. Calif., June 30, 1884.

1151 *Stipa Parishii*, Vasey.

Cantiles canyon, L. Calif., July 7, 1884.

1152

1153 *Sporobolus asperifolius* Thunb. Cantiles canyon, L. Cal.

1153 A. " " Hanson's ranch "

1154 *Agrostis verticillata* Vell.

Canyon Cantiles, Lower Calif.

1155 *Eragrostis proserpides*, var. *megastachya*, Gray.

Tecate, L. Calif., July 2, 1884. Also Tijuana valley, and Smith's mt., S. Diego Calif.)

1156 *Sporobolus airoides* Torr.

Lower Calif.

1157

1158 *Sporobolus airoides*, Torr.

National ranch, S. Diego, Calif. June 30, 1884.

1159 *Agropyrum tenerum* Lower Calif.

- 1160 *Carex siccata*, Dewey, var.
Tops, L. Calif., July 7, 1884.
- 61 *Distichlis maritima*, Raf.
Tops, L. Calif., July 7, 1884.
- 62 *Agropyrum glaucum*, R. & S.
Tops, L. Calif., July 7, 1884.
- 63 *Agropyrum tenerum*, Vasey.
Las Juntas, Lower California, July 3, 1884. (This no. by mistake has also been given to no. 1144.)
- 64 *Agropyrum glaucum* R. & S.
Mts. Lower Calif.
- 65 *Juncus bufonius*, L. (differs from type.)
Hansais ranch, L. Calif., July 9, 1884.
- 66 *Juncus triflorus*, var. *brachystylus*,
Hansais ranch, Lower Calif., July 9, 1884.
- 67 *Bromus unioloides*, Willd.
Mts. L. Calif., July 9, 1884.
- 68 *Agrostis verticillata*, Vill.
Campo, S. Diego Calif., July 3, 1884.
- 69 *Juncus oxymeris*, Engelm.
Las Juntas, L. Calif., July 3, 1884.
- 11 70 *Melica imperfecta*, Trin.
Las Juntas, L. Calif., July 3, 1884.
- 71 *Elymus Nitens*, Schult.
Las Juntas, Mts. n. L. Calif., July 3, 1884.
- 72 *Himantides giganteus* Gray. La Playa, San Diego Cal. C.R. Crenett.
- 73 *Agrostis virescens*, HBK.
San Diego Calif., June 9, 1884.
- 74 *Festuca microstachys*, Nutt. var. *divergens* or *ciliata*. San Diego city, Calif., June 2, 1884.
- 75 *Hardenia pusillum*, Nutt.
Mesas, S. Diego, Calif., June 9, 1884.
- 76 *Agrostis microphylla*, Steud. var.
Mesas, San Diego, Calif., June 9, 1884.
- 77
- 11 78 *Bromus carinatus*, A. & A.
San Diego city, Calif., June 26, 1884.
- 79 *Minulus inconspicuus*, Gray.
Chollas valley, S. Diego, Calif., June 20, 1884.

✓ 1180 *Salix longifolius*, Muhl.

Carisito, L. Calif., May 29, 1883.

81 *Meutzelia gracilenta*, J. & G.

82 *Ranunculus aquatilis*, var. *caespitosus*, DC.
L.C. 1884.

83 *Geratophyllum demersum*, L.

Tecate, L. Calif., July 2, 1884.

84 *Najas major*, Allione.

Tijuana, L. Calif., July 1, 1884.

85

86

87

88 *Chara*

Tijuana, L. Calif., July 1, 1884.

89 *Layia glandulosa*, H. & A. (depanpate).

Tecate, L. Calif., July 2, 1884.

90 *Stipa speciosa*, H. & R.

Las Juntas, L. Calif., July 3, 1884.

91

92 *Monolepis spathulata*, Gray.

Hanson's ranch, L. Calif., July 10, 1884.

93 *Brodiaea capitata*, Bth.

Mts. L. Calif.,

94 *Oxybaphus nyctagineus*, Sweet, var.

95 *Allionia incarnata*, L.

96 *Sesuvium portulacastrum*, L.

Cantiles canyon, L. Calif., July 1884

97 *Gilia bella*, Gray, n. sp.

Hanson's ranch, L. Calif., July 9, 1884.

98 *Minulus exiguus*, Gray, n. sp.

Hanson's ranch, L. Calif., July 5, 1884.

99

1200 *Delphinium simplex*, Dougl.

Hanson's ranch, L. Calif., July 1884.

1 *Epigonum gracile*, Watson.

Olaj mesas, S. Diego Calif., May 13, 1884.

2 *Soliva sessilis* R. & P.

Pt. Loma, S. Diego, Calif., May 27, 1884

3 *Anthoceros punctatus* see Herb. Gray & Harlow's letter.

" *fusiformis* Austin

" *laevis* ?? near Santo Tomas, L. Calif. "

4 *Lagenaria vulgaris*, Ser. (Gourd)

Chollas valley, S. Diego, Calif., 1884. J. H. Orcutt - in garden, introduced.

5 *Hosackia rigida*, Bth. var. *argyrea*, Watson (= *H. argyrea*, Greene)

6

7 *Malacothrix glabrata*, Gray.

Tecate, L. Calif., July 2, 1884.

8 *Anisocoma acaule*, Gray.

Hanson's ranch, L. Calif., July 9, 1884.

9 *Troximen heterophyllum*, Greene.

Mts. L. Calif., July 3, 1884.

10

11

12

13

14 *Mesembrianthemum nodiflorum*, L.

Pt. Loma, San Diego, Calif., May 1884.

15 *Calochortus luteus*, Dougl.

16

17 *Brodiaea Orcuttii*, Greene, n. sp. (= *Hookera filifolia*, Watson).

Mesas, San Diego, Calif., Apr. & May 1884.

18

19 *Acacia Greggii*, Gray. Carstiles Canyon, L. Calif., July 8, 1884. - in fruit.

1220 *Tragia stylaris*, Muhl.

Mts. L. Calif. (Yosemite), July 10, 1884.

21 *Argythamnia sericophylla*, Gray.

Cañiles canyon, July 8, 1884, (L. Calif.).

22 *Adolfia californica*, Watson, var.

Sto. Tomas, L. Calif., southward to S. Vicente, where it is large and very abundant, Sept. 1884.

23 *Polygala Fitchiae*, Gray. *californica*, Nutt.

Sausal, L. Calif., Sept. 1884.

24 *Dosinia discus* Roe. Amelia Island, Fla.

Collected by Dr. Robert E. C. Stearns

25 *Gilia guttata*, Gray.

Near Hanson's ranch (road leading to S. Rafael valley), L. Calif., Sept. 1884.

26

27 *Eupatorium occidentale*, var. *arizonicum*.

Hanson's ranch, L. Calif., Sept. 1884.

28 *Verbena bracteata*, var.

Tijuana valley, San Diego and Lower Calif.: Sept. 8, 1884.

29 *Aplopappus Palmeri*, Gray, var.

Todos Santos bay, L. Calif.: Sept. 1884.

30 *Aplopappus Orcuttii*, Gray, n. sp.

Todos Santos bay, L. Calif.: Sept. 1884.

31 *Baileya multiradiata*, H. & G.

San Rafael valley, L. Calif., Sept. 1884.

32 *Parkinsonia aculeata*, L.

San Rafael, Low. Calif., southward to near Rosario, July, 1885 - in flower. Sept. 1884 - in fruit.

33 *Verbesina densita*, Gray, n. sp.

Near Sausal, L. Calif., Sept. 1884.

34 *Aplopappus Berberidis*, Gray.

Todos Santos bay, L. Calif., Sept. 1884. July 1883.

35 *Aplopappus squarrosus*, DC.

S. Tomas, L. Calif., Sept. 23, 1884.

36 *Pluchea camphorata*, DC.

37 *Malvastrum foliosum*, Watson, n. sp.

Near Santo Tomas, L. Calif.: Sept. 1884. Also vicinity of Todos Santos bay, southward to S. Vicente.

38 *Hemizonia Wrightii*, Gray.

Sto. Tomas, L. Calif., Sept. 1884.

39 *Gnaphalium microcephalum*, Nutt. San Vicente, L. Calif., Sept. 25, 1884.

1246 *Bidens pilosa*, L.

Santo Tomas mission, L. Calif., Sept. 1884.

41 *Heterotheca grandiflora*, Nutt.

San Vicente, L. Calif., Sept. 25, 1884.

42 *Isotria*

Mesas, S. Chollas valley, S. Diego Calif., June 7, 1884.

43 *Urosalpinx cinerea* Say.

San Francisco Bay, Cal.

44 *Plantago lanceolata*,

San Diego city, Calif., June 26, 1884.

45 *Prunus fremontii*, Watson.

La Grulla canyon, southward, L. Calif. - Sept. 1884, in fruit.

46 *Specularia perfoliata*, A. DC.

Hansuis ranch, L. Calif., Sept. 18, 1884.

47 *Trichostema micranthum*, Gray.

Hansuis ranch, L. Calif.: Sept. 1884.

48 *Cleome lutea*, Hook.

Near Hansuis ranch, L. Calif., Sept. 1884.

49 *Bigelovia brachylepis*, Gray.

Hansuis ranch, L. Calif., Sept. 18, 1884 - in bud.

50 *Oxytheca trilobata*, Gray.

San Rafael valley, L. Calif., Sept. 1884.

51 *Solidago occidentalis*,

Hansuis ranch, L. Calif., Sept. 18, 1884.

52 *Brickellia grandiflora*, var. *petiolaris*, Gray.

Hansuis ranch, L. Calif., Sept. 18, 1884.

53 *Hesperochiron californicus*, Watson.

Hansuis ranch, L. Calif., Apr. 20, 1885.

54 *Linnaea proxima* Lea.

Alameda Cal.

55 *Amsinckia echinata*, Gray. ?

San Rafael valley, L. Calif., Apr. 1885.

56 *Hosackia rigida*, Benth.

Mts. of L. Calif., Apr. 20, 1885. Also at Socorro, May 7, 1886. (a.)

57 *Erigeron divergens*, T. & G.

Yolos Santos bay, L. Calif., Apr. 10, 1885, and elsewhere, not rare.

58 *Gilia inconspicua*, var. *sinuata*,

Palm valley, N. L. Calif., Apr. 9, 1885.

59

- ✓ 1260 *Croton californicus*, ("broad-leaved form apparently," Watson.)
Tijuana, L. Cal., Apr. 7, 1885.
- ✓ 1261 ~~65~~ *Claytonia exigua*, T. & G.
Under bushes, mts. L. Calif., Apr. 1885. Also near Campo, San Diego, Calif. on the hillsides.
- ✓ 1262 ~~66~~ *Lupinus concinnus*.
Hanson's ranch, L. Calif., Apr. 1885.
- ✓ 1263 ~~67~~ *Silene conoidea*, L. - apparently.
Jamul, S. Diego, Calif.: Apr. 1885.
- ✓ 1264 ~~68~~ *Hosackia argyrea*, Watson.
Pinyon forests, L. Calif., Apr. 21, 1885.
- 1265 ~~69~~
- ✓ 1266 *Pedicularis densiflora*, Bth. Near Jamul valley, S. Diego, Calif.: Apr. 1885, - in fruit.
- ✓ 1267 ~~70~~ *Gilia (Collomia) gracilis*, ("Chilian form," Gray.)
Hanson's ranch, L. Calif., Apr. 21, 1885.
- ✓ 1268 ~~71~~ *Barbarea vulgaris*, R. Br.
Hanson's ranch, L. Calif., Apr. 20, 1885.
- ✓ 1269 ~~72~~ *Atriplex californica* (young). Todos Santos bay, L. Cal., Apr. 14, 1885.
- ✓ 1269(a) *Loarex nudata*, Boott. Hanson's ranch, L. Calif., Apr. 21, 1885.
- ✓ 1270 *Lathyrus palustris*, L.
Near San Rafael valley, L. Calif., Apr. 17, 1885 and elsewhere among the hills near the coast.
- ✓ 1271 *Ephedra californica*, Watson.
San Rafael valley, L. Calif., Apr. 1885. "Mountain Tea".
- ✓ 72 *Deschampsia gracilis*, Vasey, var. a
Palm valley, S. Diego Calif., Apr. 9, 1885.
- 73 Same as No. 1272.
"locality."
- ✓ 74 *Loarex acutata*, Boott.
Guadalupe canyon, L. Calif., Apr. 10, 1885.
- ✓ 75 *Festuca microstachys*, Nutt.
Vallecito, L. Calif., Apr. 9, 1885.
- ✓ 1276 *Poa californica*, var. = *P. fendleriana* var.
Hanson's ranch, L. Calif., Apr. 21, 1885.
- ✓ 77 *Krynitzkia microstachys*, Greene.
Potrero, S. Diego, Calif., Apr. 24, 1885.
- ✓ 78 *Krynitzkia microstachys*, Greene,
Near Encinada, L. Calif., July 13, 1885.
- ✓ 79 *Plagiobothrys tenellus*, Gray.
San Rafael valley, L. Calif., Apr. 1885.

1280 *Plagiobothrys nothofulvus*, Gray.

San Rafael valley, Low. Calif., Apr. 1885. Jamacha, San Diego, Feb'y, 1885.

81 *Krynitzkia muriculata*, Gray.

Near Jamul, San Diego, Calif., Apr. 24, 1885.

82

83 *Plagiobothrys ursinus*, Gray.

Mts. L. Calif., Apr. 1885.

84 *Layia elegans*, T. & G.

Todos Santos bay, L. Calif., Apr. 16, 1885.

85 *Layia elegans*, T. & G.

Casinito, L. Calif., Apr. 8, 1885.

86 *Plantago Patagonica*, Jacq. var. *gynophalioides*, Gray. (dwarf).

San Rafael valley, L. Calif., Apr. 1885.

87 *Bastillea stenantha*, Gray.

Nehi, L. Calif., June 1885.

88 *Nicotiana trigonophylla*,

San Rafael valley, L. Calif., July 1885.

89 *Pentstemon centranthifolius*, Roth.

Mts. L. Calif., July 1885.

90 *Berula angustifolia*, Koch (?)

Santo Tomas, L. Calif., July 17, 1885.

91 *Aster Orcuttianus*, Greene, n. sp.

Santo Tomas, L. Calif., July 17, 1885.

92 *Silene Douglasii*, Hook.

Hansan's ranch, L. Calif., July 8, 1885.

93

94 *Helenium puberulum*, DC.

Near S. Tomas, July 17, 1885.

95 *Diplacus longiflorus*, Nutt. (fide Greene). (= *Minulus glutinosus*, Wendl. fide Gray.)

Near San Rafael, L. Calif., July 1885.

96

97 *Splopappus griseus*, Greene, n. sp.

Santo Tomas, L. Calif., July 21, 1885.

98 *Abutilon Horsfordia Newberryi*, Gray.

Cantilas canyon, Aug. 1, 1883.

99 *Berula angustifolia*, Koch (?)

False Bay, S. Diego, Calif., June 14, 1884.

1300 *Lippia nodiflora*, Mo.

Santo Tomas, L. Calif.; July 15, 1885.

1 *Verbena prostrata*, R. Br.

S. Tomas, L. Calif., July 15, 1885.

2 *Verbena officinalis*, L.

S. Tomas, L. Calif., July 15, 1885.

3 *Verbena ciliata*, Bth.

San Jacinto, L. Calif., July 18, 1885.

4 *Minulus nasutus*, Green.

Near S. Rafael, L. Calif., July 1885.

5 *Krynitzkia*

St. Luna, S. Diego Cal. March 24, 1884.

6 *Hosackia crassifolia*, Bth.

Smith Mt., San Diego, Calif., Aug. 1884, - in fruit, H.C. Crent.

7 *Sparganium*

Hanss's ranch, July 9, 1885.

8 *Juncus nodosus*, var. *megacephalus*,

Palm valley, L. Calif., July 25, 1885.

9 *Panicum colonum*, L.

S. Tomas valley, L. Calif., July 17, 1885.

1310 *Phoradendron Californicum*, Nutt. on *Acacia Greggii* S. Rafael valley, L. Calif.; Apr. 1885.

1310 a " " " " " "

1311 *Malvastrum densiflorum*, Watson

Tecate, L. Calif., June 29, 1885.

12 *Ancylus* n. sp. ?

San Luis Region, San Diego Co. Cal. near Pala, April 1900.

13 *Eragrostis* ~~*neo mexicana*~~ *Vasey* *Creutz* and *Vasey*, *Cont. Nat. Herb.* i. 269.

Chollas valley Aug 1885.

14 *Pupa Hemphilli* *Sterki* fide Clapp.

near Pala, S. D. Co. Cal. April 1900.

Otay, S. Diego Calif., Sept. 26, 1885.

15

16 *Grasseria tenuifolia*

Laurel, Lower Calif. (Miss Fish) June 8, 1882.

17

18

Potero, S. Diego Co., Cal. Apr. 24, 1885.

19 *Auccinea* ~~*avara*~~ n. sp.

Vicinity of San Quintin Bay, L. Cal. with no. 1322 and 1323.

1320 *Helix levis*, Pfr.

Found abundant under trunks of *Agave Schottii* on a high mesa near Rosario, L. Calif. Also north, but rare.

21 *Helix Stearnsiana*, Gabb.

Found in small numbers with the last, at Rosario, Lower California, May, 1886.

22 *Pupa chordata*, Pfr. = *P. sterckiana* Pils.

Abundant under clusters of *Rocella leucophora* along the ocean beach both north and south of San Quentin bay, L. Calif. April and May, 1886.

23 *Pupa oscutii* Pilsby, ined.?

Found with the last, but less abundant. See letter from Clapp May 6, 1910.

24 *Astragalus Hornii*, Gray.

Abundant at San Ramon, N. L. Calif., May 10, 1886, - in fl. & fruit.

25 *Astragalus Mengesii*, Gray. (*A. anemophilus*, Greene.)

Sand dunes, along the ocean beaches, north and south of S. Quentin bay, L. C., May, 1886.

26 *Lupinus concinnus*, Ag.

San Ramon, L. Calif., Apr. 1886; sandy plains, abundant.

27 *Astragalus triflorus*, Gray.

Plains near San Quentin bay and south, April 1886.

28 *Achyronychia Cooperi*, G. & G. (with *Calyptridium nemanthum*).

Near San Quentin bay, southward; April, 1886.

29 *Dalea Seemannii*, Watson, n. sp.

San Rafael ranch southward to near San Fernando, L. Calif., Apr. 27, 1886.

30 *Drymaria viscosa*, Watson, n. sp.

Vicinity of San Quentin bay, sand dunes, L. Calif., Apr. 27, 1886.

31 *Enphorbia micromera*, Boiss. = *E. Baja-Californica* sp. nov. - Millsp.

Sand Dunes, vicinity of San Quentin bay, L. Calif., Apr. 27, 1886.

32 *Phaseolus filiformis*, Benth. (probably, Watson.)

Steep side of a canyon near S. Quentin, L. Calif., Apr. 22, 1886.

33 *Oenothera cardiophylla*, Torr.

Canyon near Rosario (near 31° N. lat.) L. Calif., Apr. 30, 1886.

34 *Senecio Lemmonii*, Gray.

Near San Fernando, L. Calif., May 4, 1886.

35 *Biscutella Californica*, B. & H.

Socorro, on sand hills along the ocean beach, L. Calif., Apr. 27, 1886.

36 *Oenothera crassifolia*, Greene.

Ocean beach, Socorro, L. Calif. and southward; Apr. & May 1886.

37 *Plantago Patagonica*, HBK.

Socorro, L. Calif., May, 1886.

1338 *Astragalus trichopodes*, Gray.

San Felipe, L. Calif., May 1886, and southward to Rosario and northward to San Diego.

39 *Solanum Hindsianum*, Benth. ("a var. of *S. elaeagnifolium*, Cav." Gray.)

Vicinity of San Quentin, southward, Lower Calif., Apr. 22, 1886; in canyons and arroyos.

40 *Goldenia Palmeri*, Gray.

Sands of arroyo near San Quentin, L. Calif., Apr. 22, 1886.

41 *Encelia farinosa*, Gray.

Canyon near San Quentin, and near San Fernando, L. Calif., Apr. 22, 1886.

42 *Phacelia (Entola) hirtuosa*, Gray, n. sp.

San Felipe, L. Calif., Apr. 17, 1886.

43 *Scutellaria tuberosa*, Bth.

Vallecito, L. Calif., on sunny hillsides and in canyons, Apr. 5, 1886.

44 *Chitonia simplicifolia*, Watson, n. sp.

Near San Fernando, Lower Calif., May 1886.

45 *Trichostema lanatum*, Bth.

Near Salada, L. Calif., May, 1886.

46 *Encelia frutescens*, Gray. (glabrate form.)

Near San Fernando, Lower Calif., May 4, 1886.

47 *Eucnide cordata*, Kell.

Near San Quentin, southward; Lower Calif., Apr. 22, 1886.

48 *Nemadactylus ramosissimus*, Nutt. ("erect form", Gray). *N. rigidus* Curran.

Steep banks of hills or mesa near Rosario, L. Calif., May 1, 1886.

49 *Astragalus Nuttallianus*, W & DC.

With the last and in the valleys, L. Calif., May 1, 1886.

50 *Antirrhinum strictum*, Gray.

Vallecito, hills, L. Calif.: Apr. 5, 1886, - May, in fruit.

51 *Euphorbia tomentulosa*, Watson, n. sp.

Near Rosario in canyon leading to S. Fernando, L. Calif.: May 1886. Shrubby, 2 ft. high.

52 *Franseria camphorata*, Greene, var. *leptophylla*, Gray.

Near San Fernando, L. Calif., May 1886, - late for flowers.

53 *Tonguiera gigantea*, Orcutt, n. sp. *West American Scientist*, ii, 48 (June, 1886, - issued July 1st, 1886). My first description of a new species.

Known to the Mexicans as the cereo. Found southeast of Rosario, L. Calif., among the hills leading to San Fernando mission. May 1886; neither in flower nor in fruit.

54 *Tonguiera splendens*, Engelm.

Rosario, L. Calif., May 1, 1886.

✓ 355. *Verbesina dissita*, Gray.

La Bolla, L. Calif., May 18, 1886.

✓ 56 *Viguiera Parishii*, Greene.

Near San Quentin, L. Calif., and southward. Apr. 22, 1886.

✓ 57 *Mentzelia multiflora*, Nutt.

Near San Quentin, L. Calif., Apr. 22, 1886.

✓ 58 *Acacia Farnesiana*, Willd.

Rosario, L. Calif., May, 1886. The wood when freshly cut emits a very fetid odor.

✓ 59 *Yucca Schottii*, Engelm. — perhaps, judging from leaves only, (Watson.)

Between Rosario and San Fernando, L. Calif.. The 'tree yucca' or 'datiles'; 20 ft. or more in height and 2-3 ft. in diameter.

✓ 60 *Calandrinia Brewerii*, Watson.

La Bolla, Lower Calif., May 1886.

✓ 61 *Pogogyne serpylloides*, Gray. or *porophylloides*?

Near San Quentin, L. Calif., Apr. 1886.

✓ 62 *Atriplex leucophylla*, Dietr.

Ocean beach, Socorro, L. Calif., May 1886.

✓ 63 *Saccularia Veatchii*, Kell. = *Antirrhinum (Galvezia) juncum*, Gray.

San Telmo, southward, L. Calif., Apr. 17, 1886.

✓ 64 *Cotyledon attenuata*, Watson, n. sp.

San Quentin, L. Calif., May 1886.

✓ 65 *Hosackia nivea*, n. sp. Watson

Socorro, L. Calif., May 1886.

✓ 66 *Trifolium microdon*, H. & A.

San Roman, L. Calif., Apr. 20, 1886.

✓ 67 *Trifolium ciliatum*, Nutt.

Vallecito, L. Calif., May 1886.

68

Palm at Story's residence, San Diego, Calif., with about 60 folds to the fan-shaped leaf. Flowers small, yellowish-white. Resembles the Guadalupe Island palm.

✓ 69 *Chorizanthe Fernandina*, Watson.

Salada, Lower Calif., south to Rosario; April, 1886.

✓ 70 *Eriogonum scalare*, Watson. (Vide Pavy). (Belongs in section with *E. sulcatum* etc.)

Rosario, L. Calif., April & May, 1886.

✓ 71 *Chorizanthe fimbriata*, Nutt.

Rosario, L. Calif., May 1, 1886.

1372 *Nemacaulis Nuttallii*, Benth.

Rosario, Lower Calif., May 4, 1886.

1373 *Nemacaulis Nuttallii*, Benth.

Soconu, Lower Calif., near the beach on sand dunes; May 7, 1886.

74 *Pterostegia macroptera*, Bth. (= *Barfordia macroptera*, Parry, Proc. Dav. Acad. Nat. Sci., V, 26)

San Felipe to Rosario, Lower Calif., Apr. ¹⁷ + May, 1886.

[Nos 1 to 50 inclusive in old catalogue of herbarium.]

75 *Islematis ligusticifolia*, Nutt.

Jamacha, S. Diego, Calif.

76 *Ranunculus aquatilis*, L. v. *trichophyllus* Gray.

Canyons, San Diego, Calif.

77 *Delphinium cardinale*, Hook.

San Diego Calif.

Southward to San Quentin bay, L. Calif.

78 *Delphinium decorum*, F. & M.

San Diego, Calif.

79 *Delphinium variegatum*, F. & G.

Mohav desert, S. Bernardino, Calif.: May 1882.

80 *Palonia Brownii*, Dougl.

Mts. S. Diego, Calif.

81 *Eschscholtzia californica*, Cham. (= *E. peninsularis*, Greene)

San Diego, Calif.

82 *Platystemon californicus*, Bth.

San Diego city, Calif., 1879. San Rafael valley, L. Calif., Apr. 18, 1885. (a.)

83 *Ranneya Coulteri*, Harv.

San Diego, Calif., 1880, H. C. Coult.

84 *Meconopsis heterophylla*, Bth.

San Diego city, Cal., Apr. 3, 1880.

85 *Dendromecon rigidum*, Bth.

Hills, S. Diego, Calif., May, 1882.

86 *Argemone hispida*, Gray.

Mts. S. Diego, Calif.

87 *Canbya candida*, Parry.

Bayan pass, S. Bernardino, Calif., May 1882.

88 *Dicentra chrysantha*, H. & A.

Hills, S. Diego, Calif.

89 *Cordylanthus Nevinii*, Gray.

Cuyamaca mts., S. Diego county, Calif., Aug. 1879.

90 *Cardamine paucisecta*, Bth.

Canyons, S. Diego, Calif.

- 1391 *Erysimum asperum*, DC.
San Bernardino, Calif. May, 1882.
- 92 *Draba unilateralis*, M. & E. Jones, (= *Heterodraba unilateralis*, Greene,) *D. recurva*, Parry, ined.
Palm valley, L. Calif. - on adobe lands, Apr. 1882.
- 93 *Nasturtium officinale*, R. Br.
Imperial, S. Diego, Calif., May 1882.
- 94 *Lepidium latipes*, Hook.
San Diego, Calif.
- 95 *Lepidium flavum*, Torr.
Mohave desert, S. Bernardino Calif., May 13, 1882.
- 96 *Lepidium Fremontii*, Watson.
San Bernardino Calif., May 1882.
- 97 *Lepidium nitidum*, Gray.
Mesas, S. Diego, Calif., Feb'y 5, 1884.
- 98 *Ostelea angustifolia*, Bth.
California; C.C. Parry, 1883.
- 99 *Agave deserti*, Engelm. Mescal plant.
Cantiles canyon, L. Calif. - Aug. 1883.
- 1400 *Streptanthus heterophyllus*, Nutt.
Hills, L. Calif., Apr. 1882.
- 1401 *Iomeris arborea*, Nutt.
San Diego, Calif.; southward to San Quentin bay, L. Calif., near the coast.
- 1402 *Oligomeris subulata*, Boiss.
San Diego, Calif.
- 1403 *Helianthemum scoparium*, Nutt.
Mesas, S. Diego, Calif.
- 1404 *Viola aurea*, Kell.
Cajon pass, S. Bernardino Calif., May 1882.
- 1405 *Viola pedunculata*, Y. & G.
San Diego, Calif.
- 1406 *Frankenia grandifolia*, C. & B.
San Diego, Calif.
- 1407 *Frankenia Palmeri*, Watson.
National city, Calif., May 1882.
- 1408 *Statice Limonium*, L.
Salt flats, S. Diego, Calif.
- 1409 *Arenaria Douglasii*, Y. & G.
Mesas, S. Diego, Calif., May 1882. Southward, among the hills, into L. Calif., May 1886. (a.)
- 1410 *Calyptidium monandrum*, Nutt. San Diego, Calif.

- 1411 *Asclepias fascicularis*, DCsne.
San Diego, Calif.
- 1412 *Claytonia perfoliata*, Don.
San Diego, Calif.
- 1413 *Sidalcea humilis*, Gray.
San Diego, Calif.
- 1414 *Sphaeralcea Emoryi*, Torr.
Todos Santos bay, L. Calif., Apr. 1882. Southward to Rosario; north to S. Diego; eastward to the desert.
- 1415 *Malvastrum Thurberi*, Gray.
San Diego Calif., June 1882 - in flower.
- 1416 *Linum perenne*, L.
Mts. L. Calif., Oct. 1882.
- 1417 *Sisymbrium canescens*, Nutt.
- 1418 *Erodium cicutarium*, L'Her.
- 1419 *Larrea Mexicana*, Moricand.
Cajon pass, San Bernardino, Calif.
- 1420 *Rhus diversiloba*, T. & G.
San Diego Cal.
- 1421 *Rhus integrifolia*, B. & H.
Mesas & canyons, S. Diego, Calif., Feb., 1885. Southward to S. Quentin bay, L. Calif., near the coast.
- 1422 *Rhus laurina*, Nutt.
SD Cal.
- 1423 *Rhus ovata*, Watson.
St. James, L. Calif., Apr. 12, 1886.
- 1424 *Rhamnus crocea*, Nutt.
San Diego county, Calif.: Apr. 1882. Throughout the county and southward into L. Calif.
-
- 1425 *Rhus Hindsiana* ?
Near St. James, L. Calif., July 1885, - in fruit; Apr. 1886, - in flower.
- 1426 *Koeberia aristata* Pers.
Sausal, L. Calif., May 21, 1886.
- 1427 *Elymus Americanus* Vasey
Sausal, L. Calif., May 21, 1886.
- 1428
Near Encenada, L. Calif., Apr. 1886.
- 1429
Near San Yelmo, L. Calif., Apr. 16, 1886.

1430

Near U. S. boundary, adobe hills, L. Calif.; Apr. 1, 1886.

31 *Trisetum elongatum* Kunth.

Near U. S. boundary, L. Calif., Apr. 1, 1886.

32

Guadalupe ranch, L. Calif., Apr. 7, 1886.

33

Guadalupe ranch, L. Calif., Apr. 7, 1886.

34 *Bromus barbatus* (Steud.) (*Trisetum barbatum* Steud.)

Guadalupe ranch, L. Calif., Apr. 7, 1886.

35

San Yelmo, L. Calif., Apr. 16, 1886.

36

San Yelmo, L. Calif., Apr. 16, 1886.

37 *Trisetum elongatum* Kunth (*T. interruptum* Bunkl.)

San Ramon, L. Calif., Apr. 19, 1886.

38

Near S. Quentin bay, L. Calif., Apr. 21, 1886.

39 *Orcuttia californica* Vasey.

Near S. Quentin bay, L. Calif., Apr. 21, 1886; shores of a lagoon, abundant.

40 *Atriplex nevadensis* (Vasey) Beal (*Boua nevadensis* Vasey).

Near Vallecito, L. Calif., Apr. 5, 1886.

41 *Gartidium australe* R. Br.

Escudido ranch, S. Diego, Calif., May 1886, H. C. Orutt.

42

Soconos, L. Calif., Apr. 28, 1886.

43 *Aristida purpurea* Nutt. var.

Soconos, L. Calif., Apr. 28, 1886.

44 *Aristida purpurea* Nutt. var.

Soconos, L. Calif., Apr. 28, 1886.

45 *Binnea notabilis*, Cooper.

Hills north of San Quentin bay, northern Lower Calif., under *Agave schottii*, Apr. 1886.

46 *Cordylanthus maritimus*, Nutt.

San Ramon, L. Calif., May 10, 1886.

47 *Baeria uliginosa*, Gray.

Salada, L. Calif., May 14, 1886.

48 *Franseria dumosa*, Gray.

Near Rosaris, L. Calif., Apr. 29, 1886.

49 *Hilma ^{floccosa} ~~floribunda~~*, Gray.

mts. L. Calif., July 8, 1885.

1450 *Gilia densifolia*, Benth.

Smith M., S. Diego Cal., Aug. 1884, H. C. & J. H. Orcutt.

51 *Baeria gracilis*, Gray.

San Ramon, L. Calif., May 10, 1886.

52 *Cereus Schottii*,

San Ramon, L. Calif., Apr. 22, 1886.

53 *Cereus Pringlei*, Watson.

Near Rosam, L. Calif., May 4, 1886.

54 *Gilia heterodoxa*, Greene? *Navaretia penn. hamata*, Greene? (Parry)

San Diego, Calif., May 15, 1885. (sent to Dr. Parry as "B" 1885)

55 *Eriogonum fasciculatum*, P. fruit wanted.

San Rafael valley, L. Calif., Apr. 1885.

56 *Gilia atractylodes*, Stued. *Navaretia divaricata* Torr? (Parry)

San Antonio bay, L. Calif., May 1886.

57 *Gilia* *Navaretia hamata*, Greene? (Parry)

San Antonio bay, July 1885.

58 *Gilia capillaris*, Gray.

Near San Rafael valley, L. Calif., Sept. 1884.

59 *Tropidocarpum gracile* Hook.

Tijuana, L. Calif., Mch. 1886.

60

Topo canyon, L. Calif., July 27, 1883. Moss in fruit.

61 *Notholaena californica*, Eaton.

Sto. James, L. Calif., Apr. 13, 1886. San Felipe, L. Calif., Apr. 17, 1886.

62 *Eriogonum ~~Wrightii~~ nodosum* Small, Bull. Tor. Cl. xxv, 49,

Shrub 2 to 4 ft. high, Dos Cabezas, Colorado Desert, Nov. 1, 1890.

63 *Euphorbia polycarpa* Benth.

Dos Cabezas, Nov. 1890. *Colandrina*

64 *Buckellia californica*

Dos Cabezas, Nov. 1, 1890. Shrub about 3 ft. high.

65 *Artemisia Ludoviciana* Nutt.

Slender, suffrutescent, 2 to 4 ft. high, Dos Cabezas, Nov. 1, 1890.

66 *Eriogonum insigne*

Barro creek wash, Colorado Desert, Nov. 1890.

67 grass *Amorpha*

Last locality date.

68 *Bouteloua polystachya* Torr.

l.c.

69 *Aptelocarpus californicus* Gray.

Desert Golden rod.

l.c. Shrub, 2 to 5 ft. high. fls. deep brilliant orange yellow in profusion.

1470 Localities in San Diego county where fossils have been obtained:

- 1 Water front, San Diego bay foot of 23^d and 30th sts. - "Lusinia bed."
- 2 Grade of Nat'l City & Otay R.R. into Chollas valley, west side. "Janina bed"
- 3 Cistern of H.C. Orcutt, depth of 10 ft., stratum 1 ft. thick containing Janina dentata, Chionas, Anomia lampe, etc.
- 4 Janina dentata from near 10th & J sts. & from Manasse & Schillbees Acl. where wells have been dug.
- 5 Orcutt's addition to San Diego - Janina dentata, etc.
- 6 - Indian hill oyster bed.
- 7 Mc Grains well, Indian hill - Balanus estellanus.
- 8 Sherman well.
- 9 A.J. Chases' well
- 10 Chollas valley creek above Marilon Park on old Robinson Place.
- 11 Well on the above old Robinson Place.
- 12 Cor. H. & 14th and G & 14th sts. - grading cuts.
- 13 Old San Diego well, corner Ash & 11th sts.
- 14 False bay
- 15 Coronado Beach - well.
- 16 " " Hotel & Elvioletta bay
- 17 " " Spanish Right.
- 18 San Diego, cor. 8th and I sts, depth 30 ft.
- 19 Roseville canyon.
- 20 La Playa.
- 21 W. side of Pt. Loma, 2 1/2 miles from Ocean beach.
- 22 Soledad.
- 23 Tia Juana mastodon
- 24 San Dieguito
- 25 Elsinore
- 26 Sweetwater - Roberts' well & bones of deer.
- 27 Carisso Creek
- 28 Bones of a whale.
- 29 Mission valley, (near old town?).
- 30 Jamacha, Liscardium elatum.
- 31 Mesas and canyons.

- 1471 *Prosopis pubescens*, Bth. Fish Springs, Colorado desert, San Diego Co. Cal. 6-25, 1888.
- 2 *Bressa britica*, L. " " " " " " " " " " " "
- 3 *Eustoma exaltatum*, Griseb. Dos Palmas Springs, Colorado desert, S.D. Co. Calif. 6-25, 1888.
- 4 ^{*Cladanthus lanuginosa*, Nutt.}
~~*Dalea sp.*~~ *sp.*, Gray. Clay Hills " " " " 6-24, 1888.
- 5 *Larrea Mexicana*, Moic. In fruit. " " " " 6-22, 1888.
- 6 *Petalonyx Thurberi*, Gray. " " " " " "
- 7 *Chilopsis saligna*, Don. " " " " " "
- 8 *Cucurbita palmata*, Watson, San Felipe cañon, " " " " " "
- 9 *Dalea Emoryi*, Gray. Dos Palmas Springs, " " " " 6-25, 1888.
- 1480 " *schottii*, Torr. San Felipe cañon, " " " " 6-22, 1888.
- 1 " *sp.*, Gray. " " " " " " " " " "
- 2 *Eriogonum angulosum*, Bth. " " " " " " " " " "
- 3 *Encelia californica*, Nutt. " " " " " " " " " "
- 4 *Leonella obtusifolia*, Torr. Clay Hills " " " " 6-23, 1888.
- 5 *Asclepias* " " " " " " " " " "
- 6 " " " " " " " " 6-25, 1888.
- 7 *Tridax pulchella* HBK. " " " " " " " " " "
- 8 *Elymus canadensis* Presl. Borrego Springs " " " " 6-23, 1888.
- 9 " " " " " " " " " "
- 1490 " " " " " " " " " "
- 1 *Sporobolus cryptandrus* Gray " " " " " " " " " "
- 2 ^{*divaricata* Greene}
~~*Eleusine Wislizenia*~~ *refracta*, Engelm. " " " " " " " " " "
- 3 *Gilia Matthewsii*, Gray. San Felipe cañon, " " " " 6-22, 1888.
- 4 *Psathyrotes annua*, Gray. Dos Palmas, " " " " 6-25, 1888.
- 5 *Parkinsonia Joneana*, Watson. " " " " " " " " " "
- 6 *Encelia tomentosa* Warner's ranch, San Diego Co., Cal. 6-22, 1888.
- 7 *Muehlenbergia borealis*, Gray. San Felipe cañon, Colorado desert, San Diego Co., Cal. 6-23, 1888.
- 8 *Eriogonum deflexum*, Torr. Cañon Springs " " " " 6-27, 1888.
- 9 *Buscheta californica*, Chom. San Felipe cañon, " " " " 6-22, 1888.
- 1500 *Palafixia linearis*, Hook. Indian Springs " " " " 6-24, 1888.
- 1501 *Eriogonum fastigiatum*, Parry. Near La Salada, Lower Calif., Apr. 15, 1886.
- 1502 *Thalictrum*, *sparciflora* ? fide Rose Laguna Mt., S.D. Co. Cal. C.R.O., July, 1889.
- 3 *Viola lobata* var. *petiolata* n. var. ? fide Rose " " " " " "
- 4 *Hieracium albiflorum* Hook. fide Rose " " " " " "
- 5 *Streptanthus* n. sp. fide Rose " " " " " "
- 6 *Dios microsephus* fide Rose Laguna Mt. " " " " " "
- 7 *Loraminum* " " " " " " " " " "
- 8 *Gilia grandiflora* Hook. fide Rose " " " " " "
- 9 *Convolvulus arvensis* L. Grantville " " " " June, 1889.

1510

Campo, S.D. Co. Cal. April 1889. C.R.O.

- | | |
|---|---|
| 11. <i>Papaver californica</i> , Gray | Near " " " |
| 12. <i>Eschscholtzia minutiflora</i> , Watson | Colorado Desert, " " |
| 13. " " | " " " " " |
| 14. <i>Astragalus speciosus</i> , Parry, n. sp. | " " " " |
| 15. <i>Muhlenbergia viscidula</i> | " " " " |
| 16. <i>Pinus coulteri</i> Don. | Guadalupe Mts., Lower California. H.C.O. June 1, 1883. |
| 17. " " " " | Filberts, Wheaton, Ill. K. S. Smith. |
| 18. <i>Alnus</i> | San Diego, California. |
| 19. <i>Erythraea edulis</i> Watson. | Guadalupe Island. |
| 20. Japan wax. | Japan. from Frederick Stearns. |
| 21. <i>Abrus precatorius</i> | |
| 22. <i>Cereus caespitosus</i> | From A. Blanc. |
| 23. " " | Near Ft. Wingate, N. M., Dr. R. W. Shafield. |
| 24. <i>Mamillaria bicolor</i> | From A. Blanc. |
| 25. <i>Juglans rupestris</i> | |
| 26. <i>Echinocactus wislizeni</i> Engelm. | San Bernardino, Calif.: Parish Bros. |
| 27. <i>Yucca whipplei</i> Torr. | Mts. of San Diego, Calif. |
| 28. <i>Umbellularia californica</i> Nutt. | San Bernardino, Calif., Nov. 1883. C.R.O. |
| 29. " " | Mexico. From Mrs. J. H. Orcutt. |
| 30. " " | Florida. From Mrs. Dr. R. F. Phillips. |
| 31. " " | " " " |
| 32. " " | " " " |
| 33. <i>Candle nut</i> . | Bermudas: Benton Holcomb. |
| 34. <i>Washingtonia filifera</i> Wendl. | Centilles Cañon, Lower Calif., Oct. 1882. H.C. & C.R.O. |
| 35. "Lingok" or Chinese Horn nut. | Grows in water in China. Mrs. C. K. Smith. |
| 36. Brazil nut. | South America |
| 37. " " | Mexico. From Mrs. C. P. Taggart. |
| 38. <i>Simmondsia californica</i> Nutt. | San Diego, Calif. |
| 39. <i>Jarya alba</i> "Shagbark walnut." | Massachusetts. H.C. Orcutt, 1877. |
| 40. <i>Quercus</i> "Acorn cup." | Illinois. Miss E. E. Gray. |
| 41. <i>Abies canadensis</i> | Hartland, Vermont. |
| 42. " " | China. |
| 43. <i>Acacia</i> | Australian: San Diego, Calif. |
| 44. <i>Liquidamber styraciflora</i> | Virginia: H. C. Orcutt. Sweet gum tree balls. |
| 45. <i>Pinus muricata</i> | San Ysidro, Lower Calif., 1885. |
| 1546. <i>Verbena bracteata</i> var. | Manzanero, L. Cal. Aug. 31, 1889. |
| 47. <i>Eriogonum foliosum</i> Nutt., var. | Potrero, S. Diego Co. Cal. June 1889. |
| 1548. <i>Ceanothus holocanthus</i> Torr. | Colorado Desert Apr. 1889 (in flower) |
| 1549. <i>Verbena bracteata</i> var. | Near Ensenada, L. C. Aug. 31, 1889. |

1 " *longiflorus*

Peters, S. Diego Co., June, 1889.

2 *Eriogonum Parryi* ?

Colorado Desert Apr. 1889.

3 *Pentachaeta Oreuthii* Gray, Proc. Am. Acad. XXII, 309, Vallejo, Cal. May 4, 1886.

4 " " " " " 22 "

5 " *pallescens* Greene.

Near Santa Tamas, Los Cal. May 18 "

6 *Synchytrium papillatum* Farlow, fide Farlow
Puccinia amorphae B+C. (*Uropyxis schraetii*), fide Farlow.on *Amarpha fructuosa* {Palm Valley, } Aug. 29, 1889.
{Lower Calif.}7 *Synchytrium papillatum* Farlow fide Farlowon *Erodium cicutarium*, Otay Cal.8 *Peridermium Ephedrae* Cooke fide Farlowon *Ephedra Californica*, Lower Calif. 1883.

9 none discovered — Farlow

on *Aemopsis Californica*, San Diego Cal.

1560

? Farlow

algae
on *Polygonum Hartwrightii* {San Diego Co. Calif. }
{Laguna Mt. July 1889}1 *Gumaria nigrometrica* ?? fide Farlow

near San Fernando, Lower Calif. May 3, 1886.

2 *Gumaria Californica* fide Farlow.

La Grulla ranch " " Apr. 10, 1886.

3 *Barbula Muelleri* infant with a sterile *Hypnum*. fide Farlow

Near Santa Tamas " " " 12 "

4

seed coll. near Cuautla, Mexico.

5 *Amsonia Palmeri* Gray, Near Congress, Ariz. Apr. 21, 1896. Also abundant at Kingman.6 *Hosackia rigida* Benth. " " " " "7 *Argythamnia sericophylla* Gray.

Danby, Calif. March 27, 1896.

8 *Peucedanum*

Hualapais Springs, Ariz. Apr. 11, 1896.

9 *Mentzelia dispersa* Watson.

" " " " 11 "

1570 *Porophyllum gracile* Benth.

Danby, Calif. March 27, 1896.

1 *Dysodia porophylloides* Gray.

Near Congress, Arizona. April 1896.

2 *Eriogonum rotundifolium* Benth.

Hills near El Paso, Texas. May, 1896.

3 " *inflatum* Torr.

Near Yucca, Arizona. Apr. 8, 1896.

4 *Baccharis viminea* DC.

North of Phoenix " " 28 "

5 *Streptanthus longirostris* Wats.

Whitewater ranch, Riverside Co. Cal. Feb. 26, 1896.

6 *Malva parviflora*

Danby Cal. mch. 27, 1896.

7 *Chaenactis stereoides* H. & A.

" " " " "

8 *Hedeoma rhynoides* Gray.

Near Congress, Ariz. Apr. 1896.

9 *Minulus pubellus*

" " " " "

1580

" "

Hualapais Springs " " 11 "

1 *Ephedra trifurca* Torr.

Near Congress, Ariz. " "

2 " *Californica* Watson.

Danby, Cal. March 27, 1896.

3 *Krynitzkia angustifolia* Gray.

" " " " "

4 " *pterosarya* "

Hualapais Springs, Ariz. Apr. 16, 1896.

5 " *circumscissa* Gray.

" " " " "

6 " *barbigera* Gray.

Near Congress, Ariz. " "

7 *Plagiobothrys Arizonicus* Greene.

" " " " 21 "

8 " " "

Hualapais Springs " " 11 "

9 *Pectocarya penicillata* A. DC.

Desert plains near Peoria, Arizona.

Apr. 29, 1896.

- 1590 *Pectocarya setosa* Gray. Hualapais Springs, Arizona, April 11, 1896.
- 1 " " " Near Congress " " 21, "
- 2 *Amsinckia tessellata* Gray. Hualapais Springs " " 11 "
- 3 " *intermedia* T. & G. Near Congress " " "
- 4 *Chorizanthe brevicornu* Torr. " " " " "
- 5 *Malacothrix Torreyi* Gray. " " " " "
- 6 " " " " Drake. " " 8, "
- 7 *Rafinesquia neo-mexicana* Gray. " Congress. " " "
- 8 *Gutierrezia Euthamiae* T. & G. " " " " "
- 9 *Aplopappus gracilis* Gray. " " " " "
- 1600 " *spinulosus* DC. " " " " "
- 1 " *linearifolius* DC. Hualapais Springs " " 11, "
- 2 *Perezia nana* Gray. Near Congress, " " "
- 3 " " " El Paso, Texas, May, 1896.
- 4 *Lagia glandulosa* H. & A. Hualapais Springs, Arizona, April 11, 1896.
- 5 " " " Near Congress, " " "
- 6 *Stephanomeria pentachaeta* Eaton. " " " " 28 "
- 7 *Nasturtium officinale* R. Br. " " " " "
- 8 *Hymenoclea salsola* T. & G. Shrub 3-4 ft. high, Danby, Calif., on the Mohave desert, March 27, 1896.
- 9 *Hymenoclea salsola* T. & G. Near Congress, Arizona, April 28, 1896.
1610. *Salpiglossis mexicana* " " " " "
1611. *Sophora sericea* Watson. Shrub, 6-8 ft. high, oval in shape and very symmetrical; with masses of pea-shaped, lavender-colored to indigo blue colored flowers. Pods 6-8 inches long; evergreen. In flower April 11, 1896. Pods with beans under the bushes. Near Hualapais Springs, Ariz.
- 1612 *Baileya multiradiata* Near Yucca, Arizona, April 8, 1896.
1613. *Allium reticulatum* Fraser. " Congress " " 21, "
1614. *Nicotiana trigophylla* " Yucca " " 8 "
1615. *Malvastrum exile* Gray. Danby, Calif., March 27, 1896.
1616. *Verbesina encelioides* B. & H. Near Congress, Arizona, April 1896.
1617. *Eriogonum Abertianum* Torr. " " " " "
1618. *Phacelia crenulata* Torr. " " " " "
- 1619 " " " " Yucca " " 8, "
- 1620 *Verbena anuletia* L. " Congress " " 21 "
- 1 *Gilia Lemmonii* Gray. " " " " 21, "
- 2 *Asclepias nyctaginifolia* Gray. " " " " 21 "
- 3 *Physalis lobata* Torr. " " " " "
- 4 *Gilia filifolia* Nutt. " " " " "
- 5 *Plantago virginica* L. " Pima " " "
- 6 " *Potamogeton Jacq. var. spinulosa* Gray. " " " " "
- 7 " " " *gnaphalioides* " " " " " "
- 8 " " " " " " " " "
- 9 *Mirabilis Bigelovii* Gray. " " " " "

- | | | |
|------|---|---|
| 1630 | <i>Lepidium lasiocarpum</i> Nutt. | El Paso, Texas, May, 1896. |
| 1 | <i>Perkinsia aculeata</i> L. | Near Mellen, Arizona, April 6, 1896. |
| 2 | <i>Krameria parvifolia</i> Bth. | " Congress " " " |
| 3 | <i>Riddellia Cooperi</i> | " " " " " |
| 4 | <i>Chaenactis steroioides</i> H. & A. | " " " " " |
| 5 | <i>Minulus luteus</i> L. | " " " " " |
| 6 | <i>Franseria ambrosioides</i> Cav. | " " " " " |
| 7 | <i>Hymenatherum pentachaetum</i> DC. | El Paso, Texas, May, 1896. |
| 8 | <i>Eriogonum Abertianum</i> Torr. | " " " " " |
| 9 | <i>Franseria deltoidea</i> Torr. | Near Congress, Arizona, April 1896. |
| 1640 | <i>Baerhaavia hirsuta</i> Willd. | " " " " " |
| 1 | <i>Brodiaea capitata</i> | " " " " " |
| 2 | <i>Hymenocleppus luteus</i> | " " " " " |
| 3 | <i>Brickellia Coulteri</i> | " " " " " |
| 4 | <i>Baeria gracilis</i> | " " " " " |
| 5 | <i>Nemacaulis Nuttallii</i> | Whitewater ranch, Riverside Co. Cal. Feb. 26, " |
| 6 | <i>Sisymbrium canescens</i> Bth. | Near Congress, Arizona, April 1896. |
| 7 | <i>Syntrichopappus Fremonti</i> Gray. | Hualapai Springs " " " |
| 8 | <i>Krynitzkia circumscissa</i> Gray. | Near Congress Arizona, April 1896. |
| 9 | <i>Piregia microcephala</i> Gray. | " " " " " |
| 1650 | <i>Linum perenne</i> L. var. <i>Lewisii</i> E. & W. | " " " " " |
| 1 | " " " " " | Hualapai Springs " " " |
| 2 | <i>Gilia leptomeria</i> Gray. | Near Congress " " " |
| 3 | <i>Mentzelia dispersa</i> ? | " " " " " |
| 4 | <i>Koffmannseggia stricta</i> Benth. | " " " " " |
| 5 | <i>Franseria eriocentra</i> Gray. | " " " " " |
| 6 | <i>Goldenia Palmeri</i> | " " " " " |
| 7 | <i>Eriogonum angulosum</i> Benth. | " " " " " |
| 8 | <i>Gilia Mathewsii</i> | " " " " " |
| 9 | <i>Eriogonum Baileyi</i> var. | " " " " " |
| 1660 | <i>Calliandra eriophylla</i> Bth. | " " " " " |
| 1 | <i>Prosopis pubescens</i> Benth. | " " " " " |
| 2 | <i>Abutilon crispum</i> Don. | " " " " " |
| 3 | <i>Senecio Douglasii</i> DC. | " " " " " |
| 4 | <i>Sphaeralcea pedatifida</i> Gray, var. | El Paso, Texas, May 1896. |
| 5 | <i>Gondlora rupicola</i> Gray. Shrub 8-10 ft. high, near Hualapai Spgs, Arizona, Apr. 11, 1896. | |
| 6 | <i>Isomeris arborea</i> Nutt. | Danby, Cal. March 27, 1896. |
| 7 | <i>Lepidium Fremonti</i> Wats. | " " " " " |
| 8 | <i>Salvia Columbariae</i> Benth. | " " " " " |
| 9 | <i>Larrea Mexicana</i> | " " " " " |
| 1670 | <i>Plantago Patagonica</i> Jacq. | " " " " " |
| 1 | <i>Thamnosma montanum</i> Torr. | " " " " " |

- | | | |
|------|--|--|
| 1672 | <i>Erodium cicutarium</i> L'Her. | Near Congress Arizona, April 21, 1896. |
| 1673 | <i>Eriophyllum wallacei</i> Gray. | " |
| 4 | <i>Lepidium lasiocarpum</i> Nutt. | " |
| 5 | <i>Naticaria discoides</i> | " |
| 6 | <i>Eschscholtzia missutiflora</i> Watson. | " |
| 7 | <i>Calochortus Kennedyi</i> Porter. | " |
| 8 | <i>Medicago sativa</i> | " |
| 9 | <i>Salvia Columbariae</i> Benth. | " |
| 1680 | <i>Eulobus Californicus</i> Nutt. | " |
| 1 | <i>Acanthopappus sphaerocephalus</i> Gray. | " |
| 2 | <i>Petunia parviflora</i> Juss. | " |
| 3 | <i>Minulus glomeratus</i> Douglas. | " |
| 4 | <i>Heliotropium Curassavicum</i> | " |
| 5 | <i>Cassia armata</i> | " |
| 6 | <i>Emmenanthe penduliflora</i> Benth. | " |
| 7 | <i>Trixis angustifolia</i> | " |
| 8 | <i>Eriophyllum laosum</i> | " |
| 9 | <i>Sphaeralcea Coulteri</i> | " |
| 1690 | <i>Melampodium cinereum</i> | " |
| 1 | <i>Eriogonum fasciculatum</i> | " |
| 2 | " <i>thurberi</i> Torr. var. | " |
| 3 | " <i>thomasi</i> Torr. | " |
| 4 | " <i>inflatum</i> | " |
| 5 | " <i>angulosum</i> Benth. | " |
| 6 | " <i>trichopodum</i> | " |
| 7 | <i>Daucus pusillus</i> | " |
| 8 | <i>Pseudotsuga macrocarpa</i> | Cajon Pass, San Bernardino Co. Cal. Mch. 1896. |
| 9 | <i>Phoradendron flavescens</i> | " " " " " " " " |
| 1700 | <i>Eriophyllum wallacei</i> Gray. | Darby " " " " " " |
| 1 | <i>Psathyrotes annua</i> Gray. | " " " " " " |
| 2 | <i>Pinus monophylla</i> | Hualapai Springs Arizona, April 11, 1896. |
| 3 | <i>Brodiaea capitata</i> Benth. | " " " " " " |
| 4 | <i>Erodium cicutarium</i> L'Her. | " " " " " " |
| 5 | <i>Berberis Fremontii</i> Torr. | " " " " " " |
| 6 | <i>Cherizanthus Thurberi</i> | " " " " " " |
| 7 | " " | Near Congress, " " " |
| 8 | <i>Gaillardia Arizona</i> | " Poria " " " |
| 9 | <i>Tivela crassatelloides</i> Conn. | San Diego Cal. (Pacific Beach). |

1710 *Cylindropuntia*

near San Quentin, Lower Calif.

- 11 *Stapelia asterias*
 12 " *ciliolata*
 13 " *conspurcata*
 14 " *geminata*
 15 " *grandiflora*
 16 " " *Dammanniana*
 17 " *hispida*
 18 " *mammata*
 19 " *picta*
 1720 " *rectiflora*
 1 " *serotina*
 2 " *sisyphus*
 3 " *stella*
 4 " *pulchella*
 5 " *variegata*

6 *Opuntia Davisii* (Jide Crane) from Alvarado7 " *Emergi?* N. M. " "8 " *multiflorus* No. 2. (O. *cuscuta*?) " "9 " " 1 (O. *cuscuta*?) " "1730 " *leucospina?* " "1 " *brachyantha?* " "2 " *maritima?* " "3 " *"No 1. Arizona"* " "4 " " *Arceuth* No. 23 to W. Lewis 1897.5 " *tennispinis* " "6 " " *No. 19 to W. Lewis 1897*7 " *from imported seed (Alvarado)*8 " *Arceuth* No. 17 to W. Lewis 1897

9 " " 16 " "

1740 " *sp.* " " 15 " "

1 " " 21 " "

2 " *nitida* (Parrish) from Alvarado3 *Echinocactus whipplei* " "4 *Arca multicostrata* Sby.5 *Cardium procerum* Sby.6 *Labiata* (Rasta) *undulata* G. Ld.7 *Felania serricata* Rve.8 *Pecten subnodosus* Sby.9 *Avicula peruviana* Rve.

1750 *Cytherea chionea* mks.

S. Domingo, Baja Calif.

1 *Crinobulum imbricatum* Lam.2 *Pivela radiata* Sby.3 *Tellina rubescens* Harl.4 *Haminea vesicula* Gld.

San Quintin bay, L. Cal.

5 *Monoceros lugubre* Sby. Todos Santos bay, Lower Cal.6 " *engonatum* Conr.7 *Ranella californica* Hds.8 *Omphalius fuscescens* Phil.9 *Ocenebra poulsoni* Nutt.60 *Pteronotus festinus* Hds.

San Diego Cal.

1761 *Bulla nebulosa* Gld.2 *Monoceros pauciliratum* Stearns. Todos Santos bay, Lower California.3 *Macoma secta* Conr.

San Diego Cal.

4 *Panaulax undosus* Wood.5 *Venus similis* Sby.6 " *succincta* Val.

Santa Domingo Lower Calif.

7 " *fluctifraga* Sby.

San Diego Cal.

8 *Cerostoma nuttalli*9 *Volvarina varia* Sby.1770 *Muricea erinacoides* Val.

San Juan, S. of Cal.

1 *Capitella Glyptis saturnalis* Cpr.2 *Arbacia stellata* Gray.3 *Nassa tegula* Roe

4 ?

5 *Anomia lampy* Gray.6 *Mytilus multifarius* Cpr.7 ~~Murex~~ *Strigatella tristis* Brod.8 *Omphalius reticulatus* Wood.

9 ?

1780 *Fusus dupetithouani* Val.1 *Lucina Heliaster multiradiata* Gray.2 *Enchidella carpenteri* Binn.3 *Acanthochiton aragones* Cpr.4 *Omphalius rugosus* Ad.5 *Lucina childreni* Gray. (fossil)6 *Glycymeris multicostratus* Sby.7 *Aenele*

8

9

1790 *Eupleva muriciformis* Brod.

Guaymas, Sonora

1 *Glyptis alta* C. B. Ad.2 *Modulus catenulatus* Phil.3 *Venus subrugosa* Sby.4 *Glyptis inaequalis* Sby.5 *Cerithidea magatlanica* Cfr.6 *Obolaea amara* Cfr.7 *Chiton virgulatus* Sby.8 *Perna chemnitziana* Orb.9 *Chlorostoma rugosa* A. Ad.1800 *Semele*1 *Chione sinuillima* Sby.2 *Omphalius ligulatus* Mker3 *Cardita crassa* Gray.4 *Chlorostoma funebrale* A. Ad. San Diego Cal.5 *Septifer bifurcatus* Rve.6 *Cerithidea sacrata* Gld.7 *Litorina planaxis* Phil.8 *Donax californicus* Com.9 *Mytilus bifurcatus* Stearns1810 *Acmaea Patella discors* Phil.

Santa Rosalia, Baja Cal.

1 *Chama echinata* Brod.2 *Meretina picta* Sby.

Guaymas, Sonora.

3 *Colambella fuscata* Sby.

Santa Rosalia, Lower Calif.

4 *Chorus belcheri* Hds.

Todos Santos Bay, " "

5 *Acmaea lampe* Gray.

Santo Domingo " "

6 *Solecurtus Californianus* Com.

" " " "

7 *Tapes staminea*

San Diego Cal.

8 *Tellina binaurata* L.

" " "

9 *Fissurella volcano* Rve.

Todos Santos Bay, Lower Cal.

1820 *Nassa tegula* Reeve.

San Diego, California.

1 *Pecten aquisalcatas*

"

2 *Omphalius aurestinatus* Hds.

"

3 *Acmaea scabra*

"

4 *Venus succincta*

"

5 *Melampus olivaceus*

"

6 *Pecten monotimicus* Com.

"

7 *Saxidomus nuttallii* Com.

"

8 *Morissia morissii*

"

9 *Acmaea persona*

"

7/12/91 - copy to.

- 1836 Pupa Todos Santos bay, L. Cal.
S. D. Cal. 1896.
- 1 " "
- 2 Pupa Hemphilli Sterki, ^{Identified by G. H. Clapp.} Mesa, Mantolillo, San Diego Co. Cal., CRO. Nov. 30, 1888. 500 found under dead & decaying ^{stems of prickly pear. 1st called P. hordeacea Gabb; then P. calamitosa Phil.}
- 3 Vertigo ovata Say? Cañon Cantillas, L. Cal., Aug. 2, 1883. ^{vide Clapp.}
- 4 " " " Cuyamaca mt. S. D. Co. Cal., S. 6, 1882. ? " "
- 5 Barnacle, San Diego Cal. Tetractites porosa (Gm.) var. rubescens Darwin.
- 6 " " " " Lepas anserifera L.
- 7 " " " " Balanus amphitrite? Dar.
- 8 " " " " mediterranean sea, Balanus
- 9 " " " " Balanus lameri? (asc.)
- 10 " " " " tintinnabulum (L.)
- 1840 " " " " Tetractites porosa (Gm.) var. elegans Dar.
- 1 " " " " " " " " " " " "
- 2 Aphroplocus esmarki? San Diego Cal. Starfish.
- 3 Strongylocentrotus purpurascens A. G. San Ysidro, Lower Cal.
- 4 " " " " " " " " " " " "
- 5 " " " " " " " " " " " "
- 6 Lovenia cordiformis Luthen. " " " " " " "
- 7 Hippocampus depressus Verrill. " " " " " " "
- 8 Strongylocentrotus purpurascens Empire Oregon; Aurelius Todd.
- 9 Barnacle on Mytilus Cal. San Diego Cal. Balanus
- 1850 " " " " " " " " " " " "
- 1 Coral, Todos Santos bay, Lower Cal. same as No. 2545.
- 2 " " " " " " " " " " " "
- 3 " " " " " " " " " " " "
- 4 Probably S. D. Cal.
- 5 Crab. S. D. Calif. Pagurus
- 6 Bygonia? " " " " " " "
- 7 Crab. San Diego Cal. Portunus xantusi (Stm.)
- 8 " " " " " " " " " " " "
- 9 Physa mexicana Phil. var. near Alamo, Baja Calif.
- 1860 Limnaea Adelinae Tryon. " " " " " " "
- 1 Physa squalida Morelet? near Alamo, Baja Cal.
- 2 Physa squalida Morelet? near Alamo, Baja Cal.
- 3 Succinea negandensis Lea. La Grulla, Baja Calif.
- 4 Succinea negandensis Lea Base San Pedro Martin Mt. Baja Cal.
- 5 " " " " ? Valle Trinidad " "
- 6 Limnaea Adelinae Tryon La Grulla " "
- 7 Physa squalida Morelet? " " " " " "
- 8 " squalida Morelet? Alamo " "
- 9 Limnoides minusculus Binn. Base S. Pedro Martin Mt. " "
- 1870 " " " " " " " " " " " "
- 1879 Vertigo (near rowellii) " " " " " "

- 1872 *Ammicola* Valle Trinidad, Baja Cal.
- 3 *Psidium abditum* Hald. " " " "
- 4 *Ancylus* Sycamores near Alamo, " "
- 5 *Planorbis tenuis* Gr. Real del Castillo " "
- 6 " " Near Vallejo " "
- 7 *Physa mexicana* Phil. var. ? The Sycamores, near Alamo " "
- 8 " " " The Sycamores near Alamo " "
- 9 " " " Valle Trinidad " "
1880. *Halotis crackerodii* Leach. Santo Domingo, Baja California.
- 1 *Lottia gigantea* Gray. Todos Santos Bay, " "
- 2 *Chlorostoma gallina* " " "
- 3 *Solecurtus subter* " " "
- 4 *Acmaea patina* var. *Canningi* " " "
- 5 *Mytilus bifurcatus* Cms. " " "
- 6 *Engina carbonaria* Rue. Gulf of California. (Santa Rosalia)
- 7 *Cotica virginica* " " (Guaymas).
- 8 *Merita bernhardi* Recl. " " "
- 9 *Cardita affinis* Brod. " " "
- 1890 *Crucibulum imbricatum* Lam. " " "
- 1 *Purpura biserialis* " " "
- 2 *Helix aspersa* Mull. Mexico City, Mexico.
- 3 *Cryptomys Californica* Cms. San Diego, Cal.
- 4 *Sanguinolaria nuttalli* " " "
- 5 *Chiton dentatus* " " "
- 6 *Mytilus californianus* " " "
- 7 *Acmaea scabra* var. *limatula* " " "
- 8 *Lioecardium substriatum* Cms. " " "
- 9 *Crepidula nigra* Nutt. " " "
- 1900 *Crucibulum spinosum* Sby. " " "
- 1 *Siphonalia Kellethii* Gb. Todos Santos bay, Lower Cal.
- 2 *Columbella cornuta* Hds. San Diego Cal.
- 3 *Solen rosaceus* Gld. " " "
- 4 *Planorbis trivolvis* Say. " " "
- 5 *Alivella baetica* Cpr. " " "
- 6 " *biplicata* " " "
- 7 *Chiton scabra* Rue. Monterey Cal. RECS.
- 8 *Lepidoreusia magdalensis* Hds. " " "
- 9 *Donax semistriata* Poli. Brest, France. Prof. Baway.

1910	<i>Trinia californica</i> Gray.	San Diego Cal.	
1	<i>Drillia maesta</i>	" " "	
2	<i>Crepidula excavata</i> Brod.	" " "	
3	<i>Barleeia subtenius</i> Cpr.	" " "	
4	<i>Caecum orcutti</i> Dall.	" " "	Co-types
5	<i>Modiola capax</i>	" " "	
6	<i>Macoma indentata</i> Cpr.	" " "	
7	" <i>inquinata</i> Dosh.	" " "	
8	<i>Phasianella cincta</i> Gld.	" " "	
9	<i>Clidophora punctata</i>	" " "	
1920	<i>Trochiscus norrisii</i> Sbj.	" " "	
1	<i>Corbula luteola</i> Cpr.	" " "	
2	<i>Luticola alta</i> Com.	"	
3	<i>Litorina scutulata</i> Gld.	"	
4	<i>Chiton dentiens</i>	"	
5	<i>Mangarella conspicua</i>	"	
6	<i>Bythinella binneyi</i>	Campo " (Campo)	
7	<i>Neverita reclusiana</i>	"	
8	<i>Purpura biserialis</i>	"	
9	<i>Melampus olivaceus</i>	"	
1930	<i>Chorus belcheri</i>	"	
1	<i>Solecurtus cal.</i>	"	
2	<i>Tapes staminea</i> var. <i>diversa</i>	"	
3	<i>Acmaea patula</i> " <i>cuningii</i>	"	
4	<i>Echinarachnius excentricus</i> Val.	"	
5	<i>Lottia gigantea</i> Gray	"	
6	<i>Acmaea asui</i>	"	
7	—	mineral from C.C. Taylor & W.L. Wilhite, near	
8	<i>Iron pyrites</i>	New Mexico (C.A. Whitney's No. 2.)	
9	<i>Tetrahedrite</i>	" " "	3
1940	<i>Marcasite</i>	" " "	4
1	<i>Nicolite</i>	" " "	10.
2	<i>Muscovite</i> in quartz	" " "	11
3	<i>Lepidolite</i> , dark medium	" " "	18.
4	"	" " "	14
5	<i>Marcasite</i> in quartz	" " "	13
6	<i>Staurolite</i>	" " "	21
7	<i>Cuprite</i>	" " "	7
8	<i>Phlogopite</i>	" " "	17
9	<i>Chrysocolla</i>	" " "	6

- 1950 *Pleurotoma olivacea* Sby. Guaymas, Mexico. @ R.O.
 1 *Haliotis fulgens* (splendens) Todos Santos Bay, Lower Cal.
 2 *Acmaea asui* Midd. San Quintin Bay " "
 3 *Oliva venulata* Lam. Gulf of Cal.
 4 *Melampus olivaceus* Santo Domingo, Lower Cal.
 5 *Mecana nasuta* Carr. Bodega Bay, Cal. - RECS.
 6 *Olivella zonalis* Lam. W. Coast of Mexico
 7 *Cerithium stercus-muscarum* Val. San Juan, Gulf of Cal. Also at Guaymas.
 8 *Goniobasis haysiana* Lea. Alabama, E M Goodwin.
 9 " *olivula* Carr. " " "
 1960 " *claviformis* Lea. Turkey Creek, Knox Co. Tenn. A.P. Wetherby.
 1 *Oliva carneola* Lam. Viti Islands.
 2 *Onuphelius richardi* Payson Cannes, France.
 3 *Neverita californiana* Petit Santo Domingo, Lower Cal.
 4 *Acmaea spectrum* Todos Santos Bay, " "
 5 *Pitarina philippii* Cfr. Santa Rosalia, Gulf of Cal.
 6 *Mya arenaria* S.K. Bay, Cal. RECS.
 7 *Meritina reclinata* Say. Tampa Bay, Fla. RECS.
 8 *Chaetopleura columbiana* San Juan, Gulf of Cal. Brent
 9 *Litorina planaxis* Phil. Todos Santos Bay, Lower Cal. "
 1970 " *scutulata* " " " " "
 1 *Solecurtus subterres* " " " " "
 2 *Planorbis parvus* Cantillas Canyon " "
 3 *Acmaea patina* var *Canningii* Todos Santos Bay, " "
 4 " *asui* " " " " "
 5 *Pectolite* New Mexico (Cal Whitney's No. 9).
 6 *Magnetite* " " " 12
 7 *Goethite* ? " " " 8
 8 *Ophiolite* Mohave Desert.
 9 *Palagonite* Escandido Cal. (J.F. Delgado) A W Pray, owner
 1980 *Lothia gigantea* Gray San Quintin Bay, Baja Cal.
 1 *Helix nemoralis* L. Near Heidelberg, Germany. Carl H Eigenmann.
 2 " (*Pomatia*) *grisea* " " " "
 3 *Bulinus detritus* " " " "
 4 " " " "
 5 *Lothia gigantea* Gray Lagoon Head, Baja Cal.
 1986 Nickel ore Between Ensenada & Escandido, Baja Cal. T. Alvarado, ledge 6" wide.
 7 " " Mohave Desert (DT Cahill)
 8 Turquoise matrix " " "
 9 Epidote New Mexico. (Cal Whitney's no. 1)
 4 12 yd. deep.

1990 *Koeberia cristata* Pers.

Julian Cal., Aug. 11, 1886.

1

2

3

4

5

6

7

8

9

2000.

Composite shrub, 4 ft. high, $\frac{1}{2}$ inch in diameter, in

fruit with a few stray fls. Jan. 1, 1890, in Cottonwood valley, San Diego Co. Cal. Evergreen. Same
observed 7 ft. high, slender and bushy.

1 *Ribes sanguineum*A slender shrub, 7 ft. high, $\frac{1}{2}$ to $\frac{3}{4}$ in. in diameter, in

full flower, same date and locality.

2

Fungus collected Jan. 9, 1890 in the mts. East of Campo,

San Diego Co., Calif. on decayed wood of *Quercus agrifolia* Nees. Color when fresh, ochraceous buff. *

3.

Fungus, with last. * Color white.

4

" " " " mummy brown.

5.

" " " " buff.

6

" " " " white.

7

" " " " dark velvety seal brown margined with white.

8

" " " " ditto

9

" " " " cream when young, flattish, watery

jelly-like bladders, of a brilliant orange color in mature specimens.

2010.

Fungus, with last. * Color white to light dingy brown.

11. *Asclepias subulata* ~~Desr.~~ ^{n. sp.} ~~var. deserti~~ ~~Griseb.~~ Juice said to be exceedingly bitter.

"Junete" of the Mexicans and Indians. Possesses the medicinal properties of croton oil,
a dangerous poison. Four to 9 ft. high. Mt. Springs cañon, Jan. 13, 1890. Suffrutescent, the
few stems leafless. Used as a purgative. very strong and dangerous to use.

12.

Compositae, Mt. Springs cañon, Jan. 13, 1890. Shrubby, 4 ft. high.

13 *Rhododendrum*.on *Acacia greggii*, abundant with last in fruit & flower.

Fruit maroon color. * Jan. 13, 1890.

14 *Olneya tesota*

Palo hierno or Iron wood. Near U.S. boundary, south of Coyote

Wells. Jan. 15, 1890. A tree 20 to 25 ft. high 1 to 4 ft. in diameter. Young branches glaucous green.

15 *Croton*

Collected in the same locality on same date as last.

16. *Atriplex hymenalypha* Watson

Shrubby, 1 to 2 ft. high, 2 in. in diameter. Jan.

16, 1890. Carrizo mt. north of Coyote Wells. Colorado desert.

17

Collected with last. Suffrutescent, 3 to 4 ft. tall.

*

These color notes are based on careful comparison in the field with Ridgway's "Nomenclature of Colors".

2018.

A spinescent shrub, 8 ft. high & four to five inches in diameter of wood measured at a foot from the ground. Abundant on mesa south of Coyote Wells, Jan. 17, 1890. in fruit. Fruit a Naples yellow.*

19.

Same locality & date. in fruit & dry, a few young plants with dark & brilliant maroon purple foliage.

2020. *Lycium Torreyi* Gray.

A rigidly branched spinescent shrub, 4 ft. high, with bice green* foliage and rose purple* flowers. Coyote Wells, Jan. 24, 1890. Trunk 2 in. in diameter.

21. *Larrea mexicana*

Coyote Wells, Jan. 24, 1890. Shrub, 2 to 12 ft. high. Foliage olive green*, fls. chrome yellow*. bark gray. A liniment said to be superior to the "Mexican mustard" is manufactured from this shrub.

22. *Physalis crassifolia*

Sand washes and sides of cañons west of Lake Magueta, Colorado Desert, Lower California, Jan. 27, 1890.

23. *Encelia viscidula*

Shrubby, 1 to 3 ft. high, fls. brilliant chrome yellow*, stems 1/4 to 1 in. thick; stems and foliage a silvery white, tomentose. Same locality and date as last.

24. *Argythamnia sericophylla* Gray.

Suffrutescent, a sp. to 3 ft. high. Foliage hispid, sage green*. Same locality and date, cañons.

25. *Beleperone Californica* Benth.

Half shrubby, 2 to 6 ft. high, forming dense clusters of bushy character; stems brittle, fls. coral red*, showy. Same locality and date.

26

"Damiana" ?

A low, spreading shrub, 1 to 3 ft. high, with delicately lilac-tinted fls.* Same loc. and date.

27. *Phoradendron*Mistletoe on *Olneya tesota* trees.

Stems bice green* tinged with chestnut*, fruit tinged with maroon*. In fruit & fl. in same locality & on same date as last. Abundant, forming dense balls, 2 to 3 ft. in diameter on the trees.

28. *Atriplex*

Same locality & date. Dried fruit only, not suffrutescent.

29. *Triodia pulchella* HBK.

This grass was found growing in scattering bunches, 3 inches high, in crevices in the granite hills west of Lake Magueta, Jan. 27, 1890.

30.

A low, rigid, diffusely branched shrub, 6 ft. tall, with short thick (6 inches)

trunk & thick, short branches. Highly aromatic or balsamic, very pleasant odor. Leaves in terminal clusters on the branchlets. Cañon west of Lake Magueta, Jan. 29, 1890.



Leaf, natural size, large individual specimen.

12 ft. high.

Coyote Wells
1890

Lake Magueta

2031. *Nicotiana*

wild tobacco.

A span to a foot high, same locality & date as the last.

32. *Eriogonum*

Indian wells, Colorado Desert, on gravelly mesa near the station, Feb. 7, 1890.

33

Same locality and date. Grass.

34. *Euphorbia*

Colandrina.

Same locality and date. This herb is reputed to be a sure cure for the bite of a rattlesnake.

35

Same locality and date.

36.

" " " " This and the

following cruciferous plants formed the feed around the Indian wells & new iron stations on the plains of the Colorado Desert. "Pepper" or "tongue grass" some years evidently grows rank.

37 *Lepidium*

Same locality and date.

38

"

ditto

39. *Aligomeris subulata*

ditto

Around old station.

2040. *Astragalus*

ditto

Fls. magenta.* Not

woody stems, "Loco" used. 1 to 2 ft. high, bushy, abundant.

41 *Amaranthus*

Same locality and date.

42 *Sphaeralcea emoryi*

ditto

Suffrutescent,

1 to 5 ft. high, fls. flame scarlet,* foliage sage green.*

43 *Lepidium*

Same locality and date.

44 *Rhododendron*

ditto

On mesquite trees.

2045. *Claytonia*

Near Jamul valley, S. D. Co. Cal. Apr. 24, 1885.

46 *Claytonia rigida* A. N. S. P.

Laguna Mts., S. D. Co. Cal. Apr. 17, 1889.

47 *Claytonia rigida* A. N. S. P.

Near Los Angeles, Cal. Dr. A. Davidson, 1890.

48 " *exigua* T. & G.

Laguna Mts. Apr. 17, 1889.

49

"

"

"

"

2050.

"

perfoliata Don.

N. L. Calif. near Campo, Apr. 22, 1885.

51.

"

"

"

Jamul valley, S. D. Co. Apr. 4, 1889.

52 ~~*Bloomeria*~~ *Davidsoni* A. N. S. P.

Near Los Angeles, Cal. Dr. A. Davidson, 1890.

53. *Rhamnus crocea* Nutt. var. *montana* A. N. S. P., Laguna Mts. July 1889.

54

"

"

"

Near Los Angeles Cal. Dr. A. Davidson 1890.

55 *Ceanothus ocutti* Pavy n. sp. Near Banner, S. D. Co. Cal. May, 1889.

56

"

"

Cuyamaca Mts. July 1889.

57

"

"

(Hybrid)? Near Los Angeles, Cal. Dr. A. Davidson 1890.

58

"

cuneatus Nutt.

Near Campo, Apr. 8, 1889.

59

"

aigidus

?

Otay cañon, near S. D. Dec., 1888.

2060. *beanothus hirsutus* Nutt. Same locality and date.
2061. " *integerimus* H. & A. Near Los Angeles Calif., Dr. A. Davidson, 1890.
2062. *Sesuvium Portulacastrum* L. Near Ft. Yuma, Calif., Sept. 1890.
2063. *Hibiscus denudatus* Benth. " " " " " "
2064. *Bouteloua polystachya* Torr. " " " " " "
2065. *Eriochloa punctata* Hamilt. " " " " " "
2066. *Amarantus Palmeri* " " " " " "
2067. *Panicum colonum* L. " " " " " "
2068. *Eriogonum deflexum* " " " " " "
2069. *Physalis angulata* " " " " " "
2070. *Rhynchospora racemosa* Cargo Muchacho, Calif., Sept. 20, 1890.
2071. *Atriplex* " " " " "
2072. *Euphorbia polycarpa micromera* (Bair.) Millsp. " " " " "
2073. *Perityle* " " " " "
2074. *Allionia incarnata* " " " " "
- Flowers inconspicuous; a trailing plant spreading over ten feet of ground.
2075. *Amstida americana* L. Cargo Muchacho, Calif., Sept. 20, 1890.
2076. *Fagonia californica* Benth. " " " " "
2077. *Atriplex polycarpa* Watson Near Ft. Yuma, Calif., Sept. 1890.
2078. *Eragrostis curtispedicellata* Buckley. " " " " " "
2079. *Leptochloa mucronata* var. *pulchella* Scrib. " " " " " "
2080. *Leptochloa nimbicata* Humb. " " " " " "
2081. *Cyperus ferox* Rich. Banks of Colorado river. " " " " " 17. "
2082. *Chloris elegans* HBK. " " " " " "
2083. *Quaeda depressa* Watson " " " " " "
2084. *Atriplex* " " " " " "
2085. *Panicum crus galli* L. " " " " " "
2086. *Eucumbita palmata* " " " " " "
2087. *Aster canescens* " " " " " "
2088. " " " " " "
2089. *Baccharis sergiloides* " " " " " "
2090. *Baccharis erecta* " " " " " "
2091. *Lippia nodiflora* Michx. " " " " " "
2092. *Populus* " " " " " "
2093. *Salix alba* Haskel " " " " " "
2094. *Oenothera cardiophylla* Yuma, Arizona, Sept. 18, 1890.
- Flower sulphur yellow, 7/8 inch across.
2095. ~~Abutilon~~ *Horsfordia Newberryi* Gray Cargo Muchacho, Cal. Sept. 20, 1890.
2096. *Urochloa capitata* R. Br. Near Indio, Calif., Sept. 24, 1890.

- 2097 *Bouteloua aristoides* Thurber. *El Arroyo Muchachos, Cal., Sept. 20, 1890.*
2098. *Gutierrezia euthamiae* *Mt. Springs, Calif., Oct. 1890.*
2099. *Aster canescens* *Jacumba valley, Cal., Oct. 1890.*
2100. *Euphorbia serpyllifolia consanguinea* ^(Eng.) *W. near Camp, Cal. Oct. 1890.*
2101. *Eriogonum* *Mts. near Camp, Cal., Oct. 1890.*
2102. " " " " " "
2103. *Hosackia* *Martinez, Cal. Aug. 1, 1890. C.R.O.*
2104. *Horkelia bolanderi* var. *Paryi* *San Jacinto Mt., Cal., July, 1890. J. J. Gray.*
2105. *Eriogonum umbellatum* "
2106. *Minulus brevipes* "
2107. *Audubertia* "
2108. *Mentzelia laevicaulis* *Don. & Gray.* "
2109. *Clematis ligusticifolia* *Nutt.* "
2110. *Monardella ana* *Smith Mt. Cal., July, 1890. J. J. Gray.*
2111. *Zauschneria Californica* *Oreol.* "
2112. *Ceanothus* "
2113. *Rinodina radiata* *Near San Quintin, Lower California. C.R. Orcutt. S.H.*
2114. *Lecanora rubina* *Rock, mts. Lower Calif., July 25, 1883.* "
2115. " *pinguis* *South of Todos Santos Bay, Lower California.* "
2116. *Placodium bolacinum* *Mesas, San Diego, Calif., Feb. 13, 1883.* "
2117. *Rinodina radiata* " " " " " "
2118. *Acolium bolanderi* *Tuck.* " " " " " "
2119. *Lecanora pinguis* *Near San Quintin, Lower California.* "
2120. *Parmelia conspersa.* *New England: Mrs. R. S. Eigenmann.*
2121. *Physcia stellaris* " " " " " "
2122. *Ramalina calicaris* var. *fraxinea* " " " " " "
2123. *Graphis dendritica* " " " " " "
2124. *Chiodecton sphaerotum* *Tuck. ined.* *San Diego, Calif. C.R. Orcutt.*
2125. *Biatora atro-purpurea* *Gr.* " " " " " "
2126. *Ramalina homalea* *On Euphorbia misera, Pt. Loma, San Diego, Cal.*
- (not *Erornia prunastri*!) *Mich. 17, 1883. C.R. Orcutt. (No. 75 of old list.)*
2127. *Apeographa* *On bark of Adenostoma fasciculatum,*
- San Diego, Calif. C.R. Orcutt.*
2128. *Sethonia* *San Diego, Calif. C.R. Orcutt.*
- Parasitic upon the thallus of Pertusaria.*
2129. *Pertusaria flavicunda* *San Diego, Calif. C.R. Orcutt.*
2130. *Buellia myriocarpa* *DC.* *Chollas valley mesas, San Diego, Calif. C.R. Orcutt, Feb. 7, 1884.*
2131. *Ramalina crinita* *Tuck.* *On Euphorbia misera, Pt. Loma, " " " " Mich. 16, 1883.*
2132. *Arthonia globosa* *Tuck.* *Mesas " " " " Feb. 6, 1884.*

2133. *Theloschistes chrysopthalmus* (L.) Norm. On *Prosopis pubescens*,
Palm valley, ~~San Diego~~ Northern Lower California. C. R. Arcutt May 30, 1883.
2134. *Buellia stellulata*
2135. *Lecanora subfusca* a *allophana*
2136. " *muralis* San Diego, Calif., C. R. Arcutt.
2137. " *cervina privigna* " " " "
2138. " *atra* " " " "
2139. *Buellia halonia* Near San Telmo, Baja Calif., "
2140. *Lecanora pallida* β *cauciformis*
2141. " " " " On bark of trees and shrubs, San Diego, Cal., C. R. O.
- (107.) 2142. " *erethea* " " " " On bark of *Pinus Torreyana* " " " "
- 83 2143. " *subfusca* " " " "
- 16 2144. *Theloschistes parietinus* (L.) Norm. San Diego, Calif., Feb. 8, 1883. C. R. Arcutt.
2145. " " var. *polycarpus* (Ehrb.). San Diego, Calif., July 1882. C. R. Arcutt.
2146. " *chrysopthalmus* (L.) Norm. Lower California, near U. S. boundary. Jan. 18, 1883. C. R. O.
87. 2147. " " var. *flavicans*. On *Adenostoma*, near Colton, Calif., Dr. C. C. Pavy, Apr. 1883.
2148. " " " " Incrusted with salt.
- Near San Quintin Bay, Lower California. C. R. Arcutt, 1886.
2149. *Rinodina bolodes* Tuck. ined. Soledad cañons, San Diego Calif., " Oct. 31, 1883.
2150. *Ramalina homalea* Ach. Todos Santos Bay, Baja California, " Jan. 1883.
2151. " *ceruchis* (Ach.) De Not. San Diego, Calif., July 31, 1882.
2152. " *Menziesii* Tuckerman. Lower California near U. S. boundary. Jan. 18, 1883.
76. 2153. " *crinita* Tuck. on *Euphorbia misera*, Pt. Loma, San Diego, Calif., Mch. 17, 1883.
2154. " " " " " " " "
2155. " " " " On shrubs, Todos Santos Bay, Lower California, Jan. 24, 1883. Type.
Lace Lichen
12. 2156. " *reticulata* Krempelh. Near " " " " " Jan. 1883.
- on *Quercus agrifolia*.
2157. *Acolium Sti. Jacobi* Tuck. n. sp. Mesas, San Diego, Calif., April 2, 1882. @. G. Pringle.
2158. " " " " " " " " Feb. 8, 1883. C. R. Arcutt.
2159. *Buellia sidalea* Tuck. on *Euphorbia misera*, San Diego, Calif., Feb. 5, 1883.
- (36.) 2160. *Parmelia conspersa* (Ehrb.) Ach. near U. S. boundary, Lower California. Jan. 18, 1883.
2161. " *physodes* (L.) Ach. San Diego, Calif., Feb. 8, 1883.
2162. " *perforata* (Jacq.) Ach. sterile. near U. S. boundary, Lower California, Jan. 18, 1883.
101. 2163. *Physcia stellaris* Palm valley, on Mesquite, " " June, 1883.
2164. " " (sterile thallus) San Diego, Calif. Feb. 15, 1883.
14. 2165. " " var. *hispida* on fence, " " " " 8, "
35. 2166. " " " " " " " " 1880. From an old roof.
2167. " *erinacea* on *Euphorbia misera*, " " " " Feb. 5, 1883.
2168. *Rocella leucophaea* Tuck. " " " " "

- 2169 *Usnea barbata* ? San Diego Cal. Feb. 1883. On old fences.
- 2170 " " var. ? *hirta* (sterile). " " " Mch. 1883, on *Adenostoma fasciculatum*.
- 2171 " " ? *rubiginosa* " " " " " " " " " " " "
2172. *Rinodina sophodes* (Ach.) Nyl. " " " Feb. 14, 1883.
2173. *Lecanora Schleicheri* (Ach.) Nyl. Mosses, " " " 1883.
2174. " *varia* ? (Ehrb.) Nyl. " " " Feb. 8, 1883.
2175. " *pallida* " " " " " " *Quercus dumosa*.
- (92.) 2176. *Placodium ferrugineum* " " " " " " "
- 51 2177. *Pertusaria* (sterile.) " " " Mch. 7, 1883 Sweetwater cañon.
104. 2178. *Biatara globifera* Near Rivers, mts. Lower California, June, 1883.
- 53 2179. *Placodium cinnabarium* Rocks, near San Diego, Calif., Mch. 6, 1883.
2180. *Lecanora cervina* (Pers.) Nyl. var. Keystone ledge, Pacific Mining District, Colorado Desert, S. Diego Co., Cal. July 1888, C.R.O. var. squamulosa or glaucocarpa.
2181. ? ? ?
2182. *Aster oreuttii* Vasey & Rose n. sp. Colorado Desert.
Fls. lavender to delicate mauve, 1 inch across; suffrutescent, 1 ft. high, Carrizo creek wash, Nov. 5, 1890.
- 2183 *Aphlopappus* (?) l. c. Nov. 4.
2184. *Diconia*^{na} *canescens* l. c.
- 2185 *Bigelovia brachylepis*
Shrub, Mt. Springs, Nov. 10, 1890. 2 to 3 ft. high
- 2186
l. c. shrub 2 to 3 ft. high.
- 2187 *Senecio Douglasii*
Mt. Springs cañon, Nov. 10, 1890.
2188. *Cheilanthes myriophylla*
Los Cabezas, Nov. 7, 1890
2189. *Eriogonum deserticola* Watson n. sp.
Suffrutescent, 3 or 4 ft. high, Nov. 4, 1890. Carrizo creek wash.
- 2190 *Datura discolor* Bernh.
Carrizo creek wash, Nov. 1890.
2191. *Cucurbita palmata* Watson.
Carrizo creek wash, Nov. 5, 1890.
- 2192 *Physalis crassifolia*
l. c.
- 2193
on leaves of *Arctostaphylos pungens*, mts. S. D. Co. Cal. Nov. 1890.
2194. *Simmondsia californica* Nutt. all. Chula Vista, San Diego, Calif. April 4, 1889. C.R.O.
2195. " " " Northern Lower California, April 8, 1885. "
2196. *Euphorbia polycarpa* var. *vestita* " " " April 27, 1886. "
near San Quintin Bay.

- 2197 *Euphorbia polycarpa* var. *vestita*
 Dos Cabezas, Colorado desert, Nov. 1, 1890. C.R. Arcutt. Golondrina.
2198. *Euphorbia polycarpa micromera* (Boiss) Millsp.
 Dos Cabezas, Colorado desert, Nov. 1, 1890. C.R. Arcutt. Golondrina.
- 2199
 Wash near Carrizo creek, Colorado desert, Nov. 3, 1890. C.R. Arcutt.
- 2200 *Encelia frutescens* Gray
 Wash near Coyote wells, Colorado desert, Nov. 3, 1890. C.R. Arcutt. Shrubby, growing four or five feet high, forming an oval bush of equal diameter, with whitish bark.
2201. *Quercus dumosa* Nuttall.
 Jacumba valley, San Diego county near the Colorado desert, Nov. 10, 1890. mature fruit.
2202. *Hemizonia floribunda*
 Potrero, San Diego county, Calif., Oct. 3, 1890. One to three feet tall, with flowers of an orange-lime color, popularly known as one of the tar-weeds.
2203. *Eriogonum gracile*
 Potrero, San Diego Co., Calif. Oct. 3, 1890.
- 2204 *Eriogonum canadense*
 Potrero, S. D. Co. Oct. 3, 1890.
- 2205 *Solidago Californica*
 Potrero, S. D. Co. Oct. 3, 1890.
- 2206 *Aplappappus squarrosa*
 Potrero, S. D. Co., Calif. Oct. 3, 1890.
- 2207 *Trichostema*
 Potrero, S. D. Co. Oct. 3, 1890.
- 2208 *Quercus dumosa* Nutt. varieties.
 Potrero, San Diego county, Calif., October 3, 1890.
- 2209 *Quercus engelmannii* Greene. Fruiting branches and young growths.
 Potrero, S. Diego county, Calif., Oct. 3, 1890.
- 2210 *Sphaeralcea*
 Colorado desert near Carrizo creek, Nov. 1890.
- 2211 *Chenopodium* Arcutt, Calif. May 16, 1890.
- 2212 *Juncus bufonius* L. "
2213. *Eleocharis arenicola* Torr. "
- 2214 *Juncus balticus* Det. "
- 2215 *Avena fatua* L. 7 ft. high. "
- 2216 *Rumex* "
- 2217 " *salicifolius* "
- 2218 " "
- 2219 *Carex Hookeriana* Sw. 4 1/2 ft. high.

- 2220 *Juncus pharoccephalus* Engelm. Arcutt, Calif., May 16, 1890.
2221. *Lythrum hyssopifolia* "
- 2222 *Lolium temulentum* v. *arvense*. (*L. arvense* With)
- 2223 *Bigelovia vineta*
 Dos Cabezas, Colorado Desert, Nov. 1, 1890. Fls. bright chrome yellow.
 Suffrutescent, 2 to 3 ft. high.
- 2224 *Bigelovia brachylepis*
 Shrubby, 2 to 4 ft. high, Dos Cabezas, Nov. 1, 1890. Corolla lemon yellow, the ^{erect} chrome yellow stigmata more conspicuous.
- 2225 *Eriogonum*
 Dos Cabezas, Colorado Desert, Nov. 1, 1890.
- 2226 *Stephanomeria runcinata*
 Near Coyote Wells, Colorado Desert, Nov. 3, 1890. Usually suffrutescent, 6 inches to 4 ft. high, bushy.
- 2227 *Salix*
 Dos Cabezas, Colorado Desert, Oct. 11, 1890.
- 2228 *Eriogonum* n. sp.? l.c. Oct. 8, 1890.
- 2229 ditto
- 2230 "
- 2231 *Pectis papposa*
 Laguna Magnata, Lower Calif Oct. 5, 1890.
- 2232 *Pectis papposa*
 Jacumba valley, San Diego county, Oct. 4, 1890. Same. Fls. lemon yellow.
2233. *Baileya pauciradiata*
 Carriso creek Apr. 1890.
- 2234 *Nicotiana* l.c.
- 2235 *Minulus luteus*
 Palmita Springs, near Colorado Desert, Apr. 25, 1890.
- 2236
 Coyote Wells, Colorado Desert, Apr. 24, 1890.
- 2237 *Oenothera* l.c.
- 2238 *Krynitzkia*
 Colorado Desert, Apr. 1890.
- 2239 *Astragalus*
 Carriso creek Apr. 24, 1890.
- 2240 *Dalea* l.c. Apr. 25, 1890.
2241. *Palafoxia linearis* Lag. ditto
- 2242 *Solidago Californica* Dos Cabezas, Oct. 8, 1890.
- 2243 *Eriogonum* "
- 2244
 Palmita Springs, Colorado Desert, Apr. 26, 1890.

2245

Palmita Springs, Colorado Desert, Apr. 25, 1890.

2246

l.c.

2247

l.c.

2248 *Cotula coronopifolia*

l.c.

2249 *Phacelia*

Bariso creek Apr. 24, 1890.

2250

Vallecito, Colorado Desert, Apr. 25, 1890.

2251

Vallecito, Colorado Desert, Apr. 25, 1890. Yerba de Pasmio.2252 *Opuntia jacumbensis* A. N. S. P. ined.

Jacumba, S. D. Co. Calif. June 14, 1890. In flower.

2253 *Ranunculus*

Laguna Mt., S. D. Co. Cal., Apr. 1889. C.R.D.

2254 *Eschscholzia Californica* Cham.: Typical form; perennial, flowers 4 inches across.

Beaumont, San Geronimo Pass, S. Bernardino Co. Cal. Apr. 9, 1891.

2255 *Krynitzkia*

Northern Lower Calif. Apr. 17, 1886.

2256 *Krynitzkia*

l.c. Apr. 17, 1886

2257 "

" May 1 "

2258 "

" " 1 "

2259 "

" Apr. 6 "

2260 "

" " 21 "

2261 "

" Nov. 21 "

2262 *Plagiobolus*

Santa Isabel, S. Diego Co. May 1889.

2263 *Amsinckia*

Cotton wood valley, S. D. Co. 4/5, 1889.

2264 *Krynitzkia*

Colo. Desert Apr. 1889.

2265 "

mesas, S. Diego Cal. 2/18, 1884

2266 "

N. Lower Cal.

2267 *Phacelia whittelevia* Gray.

Near Jacumba Valley. S. Diego Co. Cal. Apr. 10, 1889

2268 *Baccharis*

Escondido, L. C. Aug. 1889

2269 "

" "

2270 *Senecio Clevelandi* = *S. parvifolia*? vide Greene.

Vallecito " May 22, 1886.

2271 *Baccharis Artemisia Californica*

near Calaveras, Riverside Co. Cal. Apr. 1891.

2272

" Elsinore "

2273 *Quercus Wislizeni* vide Sargent

" Whitewater "

- 2174 *Quercus agrifolia* Nees acorns. San Diego Calif.
- 2275 " " " " Lower Calif. Sept. 1889. Near Alamo.
- 2276 " *dumosa* " San Diego Co. Calif.
- 2277 " *parsons* fide Engelm. " " " " "
- 2278 " *Engelmanni* Greene " " " " "
- 2279 " " " " " " " " "
- 2280 " *dumosa* " " " " " "
- 2281 " — " Riverside " " given Sargent
- 2282 " *dumosa* " SD " " " "
- 2283 " " " " " " " " "
- 2284 " *Engelmanni* " " " " " "
- 2285 *Mentzelia laevicaulis* Near Pomona, Cal. Nov. 19, 1892; fls. canary, anthers
and inner petals same color; outside flesh color or white.
- 2286 *Cotyledon orbiculare* Locality? San Diego Gardens
- 87 *Macrogamia spiralis* Australia
- 88 *Selaginella pilifera* Mexico: McDowell.
- 89 *Saxifraga Parryi* San Diego
- 90 *Dodecatheon Clevelandi* Greene. San Diego
- 91 *Sedum variegatum* San Diego
- 92 *Cereus rigidissimus* Arizona
- 93 *Mamillaria decipiens* Texas: Miller & Son.
- 94 *Cyclamen repandum* Holy Land.?
- 95 " *hederacifolium* " " "
- 96 *Anilax*
- 97 *Pilocereus senilis* Mexico
- 98 *Echinopsis oxygon*
- 99 *Mamillaria Bequini* Mexico.
- 2300 *Cotyledon pulchellula* San Diego
- 2301 " *edulis* "
- 2 *Cereus pectinactus* v. *armatus* fide Haage. Texas: recd from A. M. Ramsey & Son,
as *C. caespitosus*

- 2303 *Echinocactus crispatus* Mexico
- 4 *Pilocereus Sargentianus* Acutt. San Quintin, L. Cal.
- 5 *Cereus maritimus* " "
- 6 *Aloe variegata* Africa
- 7 *Cotyledon lanceolata* ?
8 *Narcissus "Paper White"* ? White water, Colorado Desert.
- 9 *Opuntia Bigelovii* Palm valley, " "
- 2310 *Delphinium* West cañon, " " " "
- 2311 *Saxifraga Parryi* var. *fol. variegata* " " " " " "
- 12 *Brodiaea capitata* " " " " " "
- 13 *Abutilon Newbenji* " " " " " "
- 14 *Notholaena cretacea* " " " " " "
- 15 " *Parryi* " " " " " "
- 16 *Manillaria phellosperma* White water " " " "
- 17 *Echinocactus Lecontei* " " " " " "
- 18 *Cereus Engelmanni* " " " " " "
- 19 *Opuntia Parryi* ? *echinocarpa* " " " "
- 2320 " *Basilaria* var. *ramosa* Parish " = type.
- 2321 " *echinocarpa* Cajon, near Banning, Cal.
- 2 " (Platop.) ? San Bernardino valley Cal. 3 to 6 joints high, spines 1-3, 1/4 in. to 2 in. long, often absent; joints 3-5 in. across, glaucous color.
- 3 " *Bernardina* Engelm. " " " "
- 4 *Chlorogalum pumilioides* " " " "
- 5 *Opuntia* (Platop.) Cajon Pass, " " " "
- 6 *Eriodictyon angustifolium* " " " " " "
- 7 *Yucca whipplei* var. " " " " " "
- 8 *Opuntia angustata* ? " " " " " "
- 9 " *Basilaria* (type form). " " Summit.
- 2330 *Calochortus Kennedyi* Mohave.
- 1 *Yucca brevifolia* " " " "
- 2 *Echinocactus polycephalus* " " " "
- 3 *Opuntia ramosissima* (spineless form) ^{denudata} " " " "
- 4 " *Mojavensis* ? " Furnace cañon
- 5 *Cereus Mojavensis* " " " "
- 6 *Claytonia Caroliniana* v. *sessilifolia* " " " "
- 7 *Opuntia* (*echinocarpa* fide Parish) " " " "
- 8 " *ramosissima* (form with spines) " " " "
- 9 *Cereus Engelmanni* " near Hesperia.
- 2340 *Brodiaea lactea* Muilla? " near Hesperia.
- 1 *Gygadensis*? " " " "
- 2 *Cotyledon lanceolata* " " " "

- 2343 *Astragalus coccineus* Pavy. Mohave
- 4 *Brodiaea capitata* "
- 5 *Salicaria Mexicana?* "
- shrub with bladder-like fruit, pink fls.
- 6 *Notholaena* (spec. lost?) fern. Mohave: Silver Reef, Nch. 1894.
- 7 *Opuntia glaucophylla* Northern Mexico.
- 8 *Engelmanni* ? Texas?
- 9 *chlorotica* Jacumba valley.
- 2350 *macrocentra* ? near El Paso ~~N.M.~~ Texas, C.R.O. 1894
("O. tenuispina" of L. C. Nursery No. 10)
- 1 *Agave Americana* v. *variegata* fide release
- 2 " " v. *Milleri* "
- 3 *Opuntia microdasys*.
- 4 *Cotyledon Desmettiana?* near Lago, Mexico
- 5 *Crinum* "Joan d'Arc." Honolulu
- 6 *Richardia albo-maculata* Spotted Calla
- 7 *Cereus deficiens* McDowell - G. Hous.
- 8 *Echinocactus lophothele* "
- 2359 *Cotyledon secunda-glaucosa* ?
- 2360 { *Opuntia* (Cylind.)
Narcissus coregonensis steb. { pinkish-spined clavate sp., Jacumba valley
- 2361 { *Opuntia* (Cylindro),
Cooperia pedunculata steb. { spines like Bigelovii, Mt. Springs.
- 2362 { *Op. A* (Platop.) *B.* (Cylind.) both near Jacumba valley, Lyon & Cobbe No. 87
Hosackia Ensenada, L. C. Aug. 31, 1887.
- 2363 " { *Op. "never arrived" Platop. = 2362 A?* }
^ " July 13 1885.
- 2364 *Opuntia* (clavate Cylindro.) near Jacumba valley
- 5 *Cotyledon pulcherrima* ? Mt. Springs
- 6 *Mamillaria Goodriggii* v. "Californica" Mt. Springs
- 7 *Iris* "sea foam" white fls. S. D. gardens.
- 8 *Fouquieria splendens*
- 9 *Narcissus orientalis*
- 2370 *Mamillaria uberiformis* or *longimanima* ? Mexico
- 1 *Cereus flagiformis* ("never arrived" in L.A.)
- 2 *Echinocactus phyllacanthus* or *crispatus* ? Mexico

2373 *Mamillaria hemisphaerica*

4 *Mamillaria uncinata*

5 *Opuntia* (Cylind.)

San Quintin, L. Cal.

Lyons & Colbe No. 86.

6 *Opuntia prolifera*

San Diego Cal.

7 *Euphorbia guadalupensis*

El Nido, Geo R. Massholder.

8 *Agave heteracantha* Jucc. (Lechuguilla).

El Paso, Texas. Apr. 1894.

9 *Cereus stramineus*?

El Paso Texas

2380 *Cereus chloranthus*

El Paso Texas

1 *Cereus polyacanthus*

" "

2 " *desyacanthus*

" "

3 " *Raetheri*

" " (not found. - C.R.O.)

4 " *pectinatus*

4 ~~*Echinocactus wisligeri*~~ Engelm. typical

" " (not found. - C.R.O.)

5 *Echinocactus Wisligeri* Engelm. typical

" "

6 " *brigitthalonius*

" "

7 " *intertextus* v. *desyacanthus*

" "

8 *Mamillaria macromeris*

" "

9 " *tuberculosa*

" "

2390 *Houzeaua splendens*

" "

1 *Opuntia leptocaulis* DC.

El Paso Texas

2 *Opuntia Grahami*

El Paso Texas

3 *Opuntia filipendula* (Plato)

?? (glaucous) El Paso. Texas.

4 *Opuntia filipendula*

El Paso Texas

5 *Cereus desyacanthus cristatus*

El Paso Texas.

6 *Cereus cuneacanthus*

El Paso Texas.

7 *Agave Parryi* Engelm. "Mescal."

El Paso Texas.

2398 *Echinocactus uncinatus* v. *Wrightii* Engelm. El Paso Texas, Apr. 1894.

9 *Mamillaria Heydeni* ? 1 plant, El Paso Texas.

2400 *Mamillaria radicea* ? El Paso Texas.

1 *Opuntia dulcis* Engelm. El Paso Texas.

2 *Opuntia* (Plato) ? El Paso Texas

3 ? seeds El Paso Texas. perennial.

4 *Opuntia* (Plato) El Paso Texas.

5 *Opuntia* (Cyl.) *Grahamii* ? El Paso Texas

6 *Mamillaria Grahamii* El Paso Texas

7 *Casimiroa edulis* Sapota Blanco Mexico City

8 *Lucuma Bonplandii* mamee Mexico City

9 *Persea gratissima* Mexico City

2410 *Bephyranthes atamasco* Near Mexico City.

2411.	"Cebolleta", Pine forests, state of Mexico, large blue fls. poisonous.	50 bulbs.
2412	<i>Smilax</i> like tubers collected with No. 2410.	75 "
2413	<i>Fraxinus mexicana</i> Tlayacapan Mex. May 1894	104 seeds.
2414	<i>Erythrina coralloides</i> Colorin or Zompante, or Patol, Tlayacapan	"
15	<i>Salvia chia</i> "chia" Mexican markets.	"
16	<i>Cereus capollin</i> "Date" " "	"
17	<i>Mangifera indica</i> "For" " "	"
18	<i>Arctostaphylos pungens</i> "Pay to" " "	"
19	<i>Mimosa lobata</i> (2 lb. 1893) 52# 1894. Tlayacapan Mexico	"
20	<i>Agave Palmeri</i> 881 St. Basil Arizona 2 plants	"
21	" <i>Gilbeyi</i> Mexico "For" " "	"
22	" <i>Engelmanni</i> from type 1891 seeds no. Bot. Garden.	"
23	<i>Echinocactus</i> — from Greene, Lower California	"
24	" 881 San Quintin - Orcutt, 1894.	"

2425 *Jurcræa calensis* Barilletti S. Diego garden

* 2416 *Prunus capollin* "Capulin" Temperate & cold zone of Mexico May 1894. fruit flattened, 5/8 in. across, purplish black, sweet. 27 for 1 c. in Mexican markets.

- 2426 *Aralia quinquefolia* seed Mexico City
 7 *Capsicum* (mixed pepper seed) British Guiana
 8 *Agave Gilbeyi* seed Tlaxacapan, Mexico.
 9 *Acrocomia schlerocarpa* seed Orizaba "
 2430 *Anona reticulata* seed " City
 2431 *Aquilegia laevis* Mull. var. *Americana* Thering. (Identified by Heynemann)
 Tepic, N. Loreto Cal. July 4 1885. CRO.

Grasses collected for the United States Department of Agriculture

February 19th to May 31st inclusive, 1896.

- 2432 San Bernardino, Calif., Mch. 13. Possibly introduced.
 3 Scattering clumps among shrubbery. Near S. Bernardino, Cal. in sandy soil. Mch. 14.
 4 With No. 2433.
 5 " " more abundant. (= No. 2436?)
 6 *Elymus condensatus* Cajon Pass, Cal. Mar. 14.
 Large clumps growing along an irrigating ditch and among brush on hillside, mostly among shrubbery.
 2437 *Epilophus rigens* With No. 2436, along irrigating ditch; luxuriant growth; "one of the best bunch grasses in the country."
 2438 Cajon Pass, Mar. 14. Abundant on moist hill-sides.
 Owner of irrigating ditch at Cajon Pass considers Nos. 2436-2438 as nuisances and thinks nothing would eat them unless very hungry.
 7 San Bernardino, Cal. Mch. 13. "Witch grass."
 2440 Cajon Pass, Cal., abundant on moist banks and under *Pseudotsuga macrocarpa*.
 1 San Bernardino Cal. Mch. 13.
 2 Cajon Pass, on steep granitic slopes, scattering bunches, Mch. 16.
 3 Near Hesperia, Cal.; abundant, in scattering bunches, mostly in the shade of shrubs; the only grass observed between the Cajon Pass and Hesperia, Mch. 16.
 5 Sandy banks of the Mohave river, near Hesperia, in large bunches, Mch. 16.
 6 Deep sand drift, bottom of Mohave river, scattering tufts deeply rooted in the sand. Mch. 16.
 7 Rocky and sandy slope east of Hesperia near Mohave river, Mch. 16; abundant; also observed on a sandy slope near Victor, Mch. 17.
 8 Near Victor, on sandy plains, Mch. 17; very scattering clumps.

2449.

with No. 2448; scattering bunches, Mich. 17.

2450.

Sandy bottom of the Mohave river, at Victor, Mich.

17. About 1/10 of the only bunch seen sent to Washington, D.C.

1. *Aristida*

Abundant on the rocky hills around Stoddard's

Will, Mohave Desert, Mich. 17. Nos. 2449 and 2451 were the only grasses seen between Victor and Stoddard's Will.

2. *Distichlis maritima*

Abundant on alkaline flats near Newberry,

Cal. Mich. 19. - this and the following (No. 2453) the only useful species observed.

3. *Sporobolus*

Abundant on flats around Newberry, Cal. Mich.

19. - on ground deeply encrusted with alkali.

4.

with No. 2452, scattering tufts, apparently dead usually.

5.

In deep sand (sand dunes) near Camp Cady,

Mich. 19. Also collected near Lavee, Mich. 20.

6. *Hilaria rigida*

Haslett, Cal. Mich. 19. - large fields.

Also near Danby, Cal. Mich. 26.

7.

near Ash Hill, Mich. 21, on coarse gravelly slopes

in scattering tufts.

8.

Bunch grass, Danby, Cal. Mich. 26, on the mountains.

9.

" " " " " "

Fine dwarfish species in rocky places south of Danby station (no grasses observed near the station).

2460. *Sporobolus*

At a spring near Ilex, Cal.; alkaline ground.

1. *Distichlis maritima*more abundant than No. 2460. Quat-no-dohl of the Mohave Indians2. *Panicum capillare* L.

Colorado river bottom, near Needles, Calif.; "Fox-tail grass".

3. *Juncus*

" " " " " " Mich. 31. Scattering.

4.

" " " " " " Not rare.

5.

" " " " " " In salt

or alkaline location and next to No. 2461 the commonest species; recommended by G. V. McCollough as a valuable pasture grass.

6.

Known to the Mohave Indians under the name

ah-ke-ti; said to be an excellent pasture grass, growing 4 foot or so in height. Seed ground into fine flour and cooked by the Indians as a mush. Seed purchased of the Mohave Indians at the Needles, Cal. Mich. 31, with seed of No. 2467.

7.

Known to the Mohave Indians as the An-kee grass;

said to resemble millet; the Indians grind the seed into a meal and eat it in cakes. They sow the seed annually on the overflowed lands of the Colorado river and raise it both for hay and for seed. The hay when cured considered excellent by the Mexicans and teamsters at the Needles. Grows 4 or 5 ft. high.

8.

Near Yucca, A.T. Apr. 7. Not rare, volcanic formation.

9.

"

2470

"

On a steep, rocky slope.

- 2471 Abundant from near Yucca, Ariz. to Congress, Ariz.
to near Tucson, Ariz. and at El Paso, Texas.
- 2 *Oryzopsis membranacea* Near Yucca, A.T. Apr. 8. Rather scattering; sandy plains.
- 3 " " " "
- 4 *Koeberia cristata* " Kingman; scattering tufts in clefts of
precipices and in rocky places; apparently abundant.
- 5 With No. 2474 but less abundant seemingly.
- 6 Near Kingman. But little seen.
- 7 *Hilaria rigida*? " " and Wallapai Springs; abundant;
closely fed off by stock.
- 8 Between Kingman and Wallapai Spgs. Abundant on
the plains.
- 9 Abundant near Wallapai Spgs. with No. 2478.
2480. Near Kingman; abundant? (but little seen).
- 1 " " among rocks.
- 2 " Wallapai Spgs. "Bunch grass".
- 3 " " " on mts.; abundant; valuable?
- 4 " " " " less abundant.
- 5 " " " "
- 6 " " " abundant.
- No. 2482-2486 are all known as "Bunch grass".
- 7 Rye grass; the Willows, between Hackberry and
Prescott; grows 5-6 ft. high; rich bottom lands enclosed by fence - perhaps
introduced?
- 8 *Aristida* Near Wallapai Spgs.; abundant on the sandy.
- 9 *Carex* " juniper, in mts. among rocks; not abundant.
- 2490 " " " "
- 1 " " " among *Pinus ponderosa*; common.
- 2 Grassy plains near Ft. Rock; not abundant;
rather scattering, creeping root stalks.
- 3 Near Ft. Rock, abundant on rocky sides of cañons.
(= No. 2487?)
- 4 Forms almost a continuous sod on the grassy
plains near Ft. Rock; with *Bouteloua* sp. - the principal sp. on these plains.
- 5 Fietta grass; abundant between Wallapai Spgs. and
Juniper, A.T.
- 6 Abundant in crevices of rocks, etc. near Ft.
Rock.
- 7 Under juniper trees near Williamson valley, A.T.;
not very abundant, - scattering tufts.

2498

Dry plains near Williamsen valley, A.T.

9 Bouteloua

"

"

2500 Aristida

"

"

1 Hilana

"

"

2 Bouteloua

moist lands,

"

3

Dry plains

"

4

"

"

5 Aristida

Skull Valley, A.T.

6 Bouteloua

"

"Black Grass"

7

"

8

"

9

(= 2471?) near Congress, A.T. - not rare.

2510

"

common.

2511

"

2512 Hilana

"

"

13

About 20 miles N. of Congress; abundant.

Rocky mesas and cañon slopes.

14 Hordeum pusillum

Near Congress. A road side weed.

15 Aristida

" Beoria

16

"

17

Johnston grass; "the nearest grass for

an irrigated district; never dies out; introduced.

18 Sporobolus

Near Phoenix, Apr. 30. Along ditch.

19

"

20 Polygala monspeliensis

"

1 Aristida

"

Glendale, A.T. Apr. 31. Abundant.

2

"

Abundant; ditch.

3

"

4

El Paso, Texas, May 7. Hillsides; common?

5 Aristida

"

rare?

6

"

The most common in the city

7

"

(= 2471?) Rare, rocky hillsides.

8 Hilana

"

Common

9 Bouteloua

"

Rare, on hillsides.

2530 Festuca tenella

Near Wallapai Spgs., A.T. Apr. 11

1 Bromus versus Nutt.

" Congress

" 21

2 Aristida

"

" 21

3

"

" 21

4 Koeleria cristata

"

" 21

- 2535 *Festuca tenella* Near Congress, Ariz., Apr. 21, 1896; also
near Yucca, Ariz. Apr. 8.
- 6 Near Yucca, Ariz. Apr. 8.
- 2537 *Opuntia ficus indica* Mammoth Tongue; Lynn & Lobbe No. 21 from a Los Angeles Garden.
- 2538 *Opuntia nuda*
Los Angeles garden; Lynn & Lobbe No. 24
- 2539 *Alae mexicana* from Leach
- 40 " " Mrs. Brandegee
- 41 *Cereus triangularis* var. *guatemalensis* Los Angeles garden: Guatemala?
- 2 *Opuntia* San Quintin Lower Calif.
- 3 " *frutescens major* Monterey Mexico
- 2544
near Soledad, San Diego City Cal. Sea fan. Spec. sent Amer. Mus.
- 5
Red coral on rocks near San Ysidro landing, Baja Calif. C. R. Arcutt Sept. 1889.
- 6 *Diadema mexicanum* C. Ag.
San Diego Calif. C. R. Arcutt
- 7 *Pollicipes polymerus* Sby.
Goose barnacle, San Diego Cal.
- 8 *Astropecten* sp.
Santo Domingo, Baja Calif. C. R. Arcutt. 1899.
- 9 *Arbacia stellata* Gray. With No. 2548.
- 2550 " " " "
- 1 *Encope californica* Verrill. " "
- 2 *Echinarachnium excentricus* Val. " "
- 3
Spunge from Todos Santos Bay, Baja Cal.
- 4 *Linckia* San Diego Cal.
- 5 *Heteroglossus oregonensis* Dana?
False Bay, San Diego Cal. Sea Urchin.
- 2556 *Cotyledon*
Sent No. Bot Gard. 1891.
Banner, Cal. among rocks
- 2557 *Cotyledon*
Ditto
San Felipe on rocky hills.
- 2558 *Cotyledon*
Ditto
Blair valley on rocky hills.
- 2559

2560 *Opuntia* (Plato.)

Between Redlands and Beaumont, Cal.

2561. *Opuntia* (Cyl.)

Near Beaumont Cal.

2562. *Opuntia* (Plato.)

Near Beaumont, Cal.

2563. ~~2565~~. *Opuntia* (Cyl.)

Near Whitewater, Cal.

2564 *Cereus Engelmanni*

5 Cotyledon

6 *Opuntia basilaris* var.

7 " (Cyl.)

8 *Hesperocallis undulata*9 *Opuntia* (Cyl.)

2570

1 *Cucurbita*2 *Opuntia* (Cyl.)3 *Mammillaria phellosperma*4 *Opuntia tessellata*5 " *Bigelovii*

6 " (Cyl.)

7 *Echinocactus Lecontei*8 " *Emoryi*9. *Mammillaria arizonica grahami*2580. *Opuntia leptocaulis*1 " *fulgida*2 " *arbuscula*3 *Mammillaria Thornberi* Orcutt type4 *Echinocactus Lecontei* var.5 " *wislizeni albispina* Tournay

Seed from original (type) plant in University garden.

2586 *Opuntia engelmanni*7 " *tetracantha*8 " *spinosior*9 " *macrocentra*.2590 " *filipendula*1 " *versicolor*2 " *phaeacantha*3 " *vaginata*

near Whitewater, Cal.

" " "

Acolita "

near Ogilby "

" " "

Yuma A.T.

" "

Ogilby Cal.

near Gila City, A.T.

" " " "

Yuma, A.T.

Gila City, A.T.

Texas Hill, A.T.

near Gila Bend, A.T.

"

"

"

"

"

near Casa Grande, A.T.

" Red Rock "

" Tucson "

Tucson, A.T.

"

"

Bowie A.T.

Tucson A.T.

- | | | |
|-------|--|---------------------------|
| 2594. | <i>Opuntia mamillata</i> | Tucson Arizona |
| 5 | <i>Agave treleasei</i> | " " |
| 6 | " <i>schottii</i> | " " (Santa Catalina Mts.) |
| 7 | " <i>huachuensis</i> | " " |
| 8 | <i>Cereus fendleri</i> | " " |
| 9 | <i>Opuntia spinosior cristata</i> | " " |
| 2600 | <i>Mammillaria grahamii</i> | " " |
| 1 | " <i>gummifera</i> | Near " " |
| 2 | " <i>olivacea</i> | " " " |
| 3 | <i>Echinocactus falcatus</i> | " Guaymas |
| 4 | <i>Agave</i> | " " " |
| 5 | <i>Echinocactus Emeryi</i> | " " " |
| 6 | " <i>longihamatus</i> | Bermujillo, Durango. |
| 7 | " <i>uncinatus</i> | " " |
| 8 | <i>Mammillaria comifera</i> | " " |
| 9 | " n. sp. <i>anthophylloides</i> | " " |
| 2610 | <i>Cereus dubius</i> | " " |
| 1 | <i>Mammillaria macromeris</i> | " " |
| 2 | <i>Cereus greggii</i> | " " |
| 3 | <i>Opuntia nuda</i> | " " |
| 4 | " <i>rosea</i> | " " |
| 5 | <i>Yucca</i> | " " |
| 6 | <i>Agave</i> | " " |
| 7 | " <i>lecheguilla</i> | " " |
| 8 | <i>Mammillaria Pottii</i> | " " |
| 9 | " <i>tuberculosa</i> | " " |
| 2620 | <i>Agave maculata</i> "Guaco" | " " |
| 1 | <i>Opuntia</i> | " " |
| 2 | " | " " |
| 3 | " | " " |
| 4 | <i>Echinocactus bicolor schottii</i> | " " |
| 5 | <i>Anhalonium fissuratum</i> | " " |
| 6 | <i>Opuntia leptocaulis</i> | " " |
| 7 | <i>Hechtia</i> | " " |
| 8 | <i>Cereus weberi</i> | Tehuacan, Puebla. |
| 9 | " <i>marginatus</i> | " " |
| 2630 | " <i>geometricus</i> | " " |
| 1 | <i>Echinocactus</i> | " " |
| 2 | <i>Opuntia</i> | " " |

2633. *Opuntia*

Tehuacan, Puebla.

4.

"

5 *Cereus Hollianus*

"

6 *Echinopsis*

"

7 *Echinocactus*

"

8 *Yucca*

"

9 "

"

2640. Papaya

"

1 Capulin

"

2 Date

"

3 Aguacate

"

4

"

5 Tomato

"

6 "Cholula;" *Vitex mollis*?

"

7 Pitalla

"

about 700 seeds in 1 fruit

8 Tiotilla seeds from market

"

9 *Cereus Houletti*

"

2650 agave

"

1 *Mammillaria*

"

2 " *elegans*

"

3 "

"

4 "

"

5 "

"

6 *Echinocactus*

"

7 Agave

"

8 "

"

9 *Hechtia*

"

2660 "

"

1 *Sedum*

"

2 aloe ("Savila")

"

3 Agave

"

4

"

5 *Opuntia*

"

6 *Cereus*

Tehuacan, Oaxaca. also found at San Antonio in flower 28 Feb 1902.

7 *Sedum*

"

8 *Cotyledon*

"

9 *Delphinella*

"

2670 *Cereus geometrizans*

"

1

"

2672. *Echinocactus*

Tomellin, Oaxaca.

3 *Mam. carnea* Zucc.

"

4 "

"

5 *Cereus*

"

6 "

"

7 "

"

8 "

"

9 " *chrysanthus*?

"

13th 1902.

2680 "

"

1 *Opuntia*

"

2 "

"

3 "

"

4 *Agave*

"

5 *Hechtia*

"

6 *Pedilanthus*

"

7 *Opuntia*

"

8 *Mammillaria elegans*

Oaxaca.

9 " *mutabilis*

"

2690 " *radians*

"

1 *Echinocactus recurvus*

"

2 *Pereskia*

"

3 "

"

4 *Opuntia*

"

5 "

"

6 *Nopalea*

"

7 *Opuntia*

"

"Juna Blanca." Seeds.

8 *Cereus marginatus*

"

9 "

"

2700 " *beneckii*

"

1 "

"

2 *Opuntia*

"

3 "

"

4 "

"

5 *Cereus Hoppenstedtii*

San Antonio, Oaxaca.

6 "

"

7 "

"

8 *Mam.*

"

9 *Cereus*

"

2710. "

"

2711 *Cereus* (Pitala, Tehuacan market Je 1902). San Antonio, Oaxaca.

2 *Pereskia* "

3 *Mam.* "

4 *Crinum americanum* "
Manteda sessiliflora

5 *Crinum americanum*

Lava fields, Ajusco, near Mexico City.

6 *Agave scolymus* "

7 *Peperomia umbellicaria* "

8 *Solanum tuberosum* "

9 *Yucca Pringlei* "

2720. *Pellaea cuneata* "

1 *Asplenium monanthum* "

2 *Adiantum tenerum* "

3 *Polypodium plebeium* "

4 " *subpetiolatum* "

5 " *thysanolepis* "

6 " *lanceolatum* "

7 *Cheilanthes farinosa* "

8 *Woodzia* "

9 *Cheilanthes microphylla* "

2730. *Notholaena dealbata* "

1 " *feruginea* "

2 *Pellaea infamarginalis* "

3 " *ternata* "

4 " *marginata* "

5 *Selaginella cuspidata* "

6 *Eryngium longispinum* "

7 *Comellina coelestis* "

8 *Priornisadium mexicanum* "

9 *Sisyrinchium alatum* "

2740. *Oxalis Pringlei* "

1 *Ribes* "

2 *Aibatus* "

3 *Rosa canina* "

4 *Sedum Balesii* "

5 " *dendroideum* "

6 *Senecio praecox* "

7 *Apuntia* "

8 *Mammillaria* "

9 *Spiranthes polycantha*

Elalpan, Mexico.

2750 Talinum

Tlalpam Mexico.

- 1 Dioscorea convolvulacea "
- 2 Nothoscordum striatum "
- 3 Zephyranthes "
- 4 Spreckelia fumosissima "
- 5 Opuntia "
- 6 Oxalis lineata? "
- 7 Ophioglossum "
- 8 Woodsia mollis "
- 9 Pellaea Seemannii "

2760 Cereus

Guadalupe, Mexico.

1 " "

2 Nam. ~~Sp. Grahami~~ n. sp. Graham!

3 Agave vestita "

4 Cereus "

5 " "

6 Nopalea "

7 Opuntia "

8 Bombar Palmeri "

9 Plumeria Lambertiana "

2770 Dorstenia Drakeana

1 Gymnogramme Hartwegii "

2 " "

3 Agave "

4 " "

5 Spiranthes "

6 Cacalia "

7 Cheilanthes cooperi "

8 Blechnum scandentia "

9 Begonia "

2780 Bessera elegans

1 Adiantum tricholepis "

2 Notholaena sinuata "

3 Nam. Scrippsii Orcutt n. sp. Pitullo "

4 Yellium aurantiacum "

5 Selaginella crispata elongata "

6 Hymenocallis Galvestoniensis "

7 Opuntia "

8 " "

- 2789 *Myrtus* - ? "arranon; arrayan. Guadalajara
- 2790 *Agave* "
- 1 *Cereus* "
- 2 *Vitex mollis* "
- 3 *Hibiscus* " La Flor de Jamaica: Flowers used in making
agua fresca.
- 4 *Dioscorea* " "
- 5 *Erythrina flabellifera* "
- 6 *Mammecia emarginata* ? "
- 7 *Palma* Plan de Baranca.
- 8 *Mesquite* Guadalajara.
- 9 *Pinus oocarpa* Plan de Baranca.
- 2800 *Echinocactus coptenogonus* maja San Luis Potosi
- 1 " *cornigerus* "
- 2 *Mammillaria uncinata* "
- 3 " *radicans pectenoides* "
- 4 *Cereus* "
- 5 *Mammillaria* Zapatilla, S.L.P.
- 6 *Pelecyphora* "
- 7 *Anhalonium prismaticum* "
- 8 *Cereus pectinatus* "
- 9 " *geometrizans* "
- 2810 " *stramineus* "
- 1 " *marginatus* "
- 2 " *procumbens* "
- 3 *Agave lecheguilla* "
- 4 " *americana* "
- 5 " "
- 6 *Yucca* "
- 7 *Echinocactus ornatus* "
- 8 *electrocanthus* "
- 9 *cornigerus* "
- 2820 *Lophothelys* "
- 1 *lanceus* "
- 2 *phyllacanthus* "
- 3 *Mammillaria echinus* "
- 4 *decipiens* "
- 5 *eschaezianus* "
- 6 *acanthophlegma* "
- 7 *scheeri* "

2828 *Mammillaria* ~~alternata~~ = *divergens* Zapatilla S L P.

9 " "

2830 " *conifera* "

1 *Opuntia* "

2 " "

3 " "

4 " "

5 " "

6 " "

7 " "

8 " "

9 *Cactus bruneus* "

2840 *Opuntia* "

1 *Nolina* ? "

2 *Mammillaria bocasana* San Luis Potosi

3 *Echinocactus spinosus* "

4 *Leachitubergia principis* "

5 *Cactus densispinus* "

6 *Mamm.* "

7 *Cereus* Cuba in "

8 Seeds "Palometa." "

9 " "Yuna morada" "

2850 " " *camuessa* "

1 " " *amarilla crystallina* "

2 " " *Blanca Mexicana* "

3 " " *tapona* "

4 " " *cardona* "

5 " " *quejas* "

6 " " *Crystallina blanca.* "

7 *Euphorbia* ? Guadalajara.

8 *Opuntia* " market

9 *Guajillo*. Tree or shrub 10° high. Tehuacan?

2860 Seeds. San Luis Potosi market.

1 " "

2 " "

3 " "

4 " "

5 " "

6 " "

2867 seeds

San Luis Potosi market.

8 "

9 "

70 "

1 "

2 "

3 "

4 "

5 "

6 "

7 "

8 "

9 "

80 "

1 "

2 "

2883 "

- 4 Recipe for painting: Get some dry dark colored yellow ochre; buy 2 gals. milk ~~at~~ night, skim next morning, scald till near boiling (don't burn it), let stand 10 minutes then skim again & then stir in ochre till as thick as you can spread evenly & mix it very thorough. Not cost $\frac{1}{5}$ as much as oil paint & 1 coat last longer than 2 coats of oil. Don't mix with milk that has thickened or any paint ground in oil. For doors & windows take dry vermilion red. Stir often while using.

2885.

on bark of *Quercus agrifolia*, Jamul, San Diego Co., Cal. April 1889. C.R. Orcutt. Fungus.

2886 *Convolvulus*

?

Llebra or Yedra. Guadalupe, Mexico.

2887 Shrub

Oaxaca (Tomellin).

2888 — Mexico?

2889 "

2890 *Sesamum indicum*.

Ajonjolí.

Oaxaca.

2891

Tehuacan.

2892.

"

?

2893

"

?

Pages 137 through 257 are blank.

SAN DIEGO, CAL.

